

General Instructions

- (i) This booklet contains 150 questions, each provided with a complete, step-by-step solution.
- (ii) It comprises 150 single-correct multiple-choice questions.
- (iii) Attempt each question on your own before reviewing the given solution.

1. The leading brand of artificial sweetener in India, 'Sugar Free' is owned by

- (A) Cipla
- (B) Cadila
- (C) Glaxo
- (D) Monsanto

Correct Answer: (B) Cadila

SOLUTION:

This question checks whether you know which company sits behind a familiar consumer brand, Sugar Free, the artificial sweetener found in almost every Indian kitchen and coffee shop.

1. **Cipla:** Cipla is one of India's largest pharmaceutical companies, known for medicines and inhalers. It has no business line in tabletop sweeteners.
2. **Cadila:** Correct. The Sugar Free brand is owned and sold by Zydus Wellness, the consumer wellness company that belongs to the Cadila (Zydus) group.
3. **Glaxo:** Glaxo, part of GlaxoSmithKline, is linked in India with brands like Horlicks and Sensodyne, not with sweeteners.
4. **Monsanto:** Monsanto is an agricultural and seed technology company. It has never sold a sweetener product in India.

Since only Cadila's Zydus Wellness division actually makes and sells Sugar Free, option (B) is the correct answer.

Let's summarize:

- Sugar Free is a Zydus Wellness product, and Zydus Wellness belongs to the Cadila group.
- Cipla, Glaxo and Monsanto work in unrelated businesses such as pharma and agri biotech.

So the brand ownership of Sugar Free points clearly to Cadila.

Quick Tip: Think about which pharma linked group in India runs a separate consumer wellness company that sells tabletop sweeteners.

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2. Monsoon is caused by

- (A) Movements of cloud
- (B) Impact of Summer temperature on the sea
- (C) Rise in temperature
- (D) Seasonal reversal of winds

Correct Answer: (D) Seasonal reversal of winds

SOLUTION:

Monsoons are a classic geography topic built on the idea of land and sea heating unevenly through the year. Let's check each option against that idea.

1. **Movements of cloud:** Clouds move because of the wind, so cloud movement is a visible result of the process, not the trigger behind it.
2. **Impact of Summer temperature on the sea:** The sea does warm in summer, but by itself this does not explain why the wind changes direction across seasons, so it is only part of the story.
3. **Rise in temperature:** A temperature rise happens every summer everywhere, yet not every place gets a monsoon, so temperature rise alone cannot be the defining cause.
4. **Seasonal reversal of winds:** Correct. Land and sea heat and cool at different rates through the year, and this difference reverses the pressure pattern and therefore the wind direction each season, which is exactly what a monsoon is.

Because the land sea temperature difference flips the wind direction from onshore in summer to offshore in winter, the seasonal reversal of winds is the actual definition of monsoon, matching option (D).

Let's summarize:

- Uneven heating of land and sea drives pressure differences across seasons.
- These pressure differences reverse the wind direction, and that reversal is the monsoon itself.

So the correct cause of the monsoon is the seasonal reversal of winds.

Quick Tip: Recall that land and sea heat unevenly through the year, and this difference flips the wind direction each season.

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3. An Indian company manufacturing automobiles for Mitsubishi is

- (A) Tata Motors
- (B) Bajaj Tempo
- (C) Mahindra
- (D) Hindustan Motors

Correct Answer: (D) Hindustan Motors

SOLUTION:

This question tests knowledge of Indian carmakers that built vehicles under license from foreign brands, a common feature of the Indian auto industry before it matured into home grown design.

1. **Tata Motors:** Tata Motors has always built and sold its own designed vehicles, from the Indica to commercial trucks, without a Mitsubishi tie up.
2. **Bajaj Tempo:** This company, renamed Force Motors later, stayed focused on load carriers and utility vehicles rather than partnering with Mitsubishi for cars.
3. **Mahindra:** Mahindra is better known for its collaborations with Ford in the past and SsangYong more recently, not with Mitsubishi.
4. **Hindustan Motors:** Correct. Hindustan Motors tied up with Mitsubishi Motors and assembled models like the Lancer at its Tiruvallur plant near Chennai.

Since Hindustan Motors is the company on record for producing Mitsubishi vehicles in India, option (D) fits the question.

Let's summarize:

- Hindustan Motors and Mitsubishi Motors had a long running manufacturing partnership.
- Tata Motors, Bajaj Tempo and Mahindra built their own vehicles or partnered with different foreign brands.

So the correct answer is Hindustan Motors.

Quick Tip: Think of the Indian carmaker that assembled the Mitsubishi Lancer in India.

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4. The name "Koneru Humpy" is associated with which of the following sport?

- (A) Badminton
- (B) Cricket
- (C) Chess
- (D) Weight Lifting

Correct Answer: (C) Chess

SOLUTION:

Questions like this one test whether you can match an Indian sportsperson's name to their actual field, based on well known career facts.

1. **Badminton:** India's leading badminton names are players like Saina Nehwal and P. V. Sindhu, not Koneru Humpy.
2. **Cricket:** Cricket in India is dominated by names like Mithali Raj and Smriti Mandhana, so this option does not fit Humpy.
3. **Chess:** Correct. Koneru Humpy is a celebrated Indian chess Grandmaster, one of the youngest women ever to earn that title, with major Olympiad and World Rapid Championship credentials.
4. **Weight Lifting:** Indian weightlifting is associated with athletes such as Mirabai Chanu, a completely different discipline from chess.

Given her record as a Grandmaster and Olympiad player, Koneru Humpy's sport is chess, matching option (C).

Let's summarize:

- Koneru Humpy holds the Grandmaster title in chess.

- The other three sports belong to different well known Indian athletes.

So chess is the correct answer.

Quick Tip: She is one of India's youngest female Grandmasters in a board game, not a field sport.

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5. The new coin 'Rupiya' was issued for the first time by

- (A) Sher Shah Suri
- (B) Akbar
- (C) Ala ud din Khilji
- (D) Mohammed Shah Tughlaq

Correct Answer: (A) Sher Shah Suri

SOLUTION:

This is a factual history question about the origin of the rupiya, the ancestor of today's rupee, and which ruler is credited with introducing it.

1. **Sher Shah Suri:** Correct. During his currency reforms in the 16th century, Sher Shah Suri introduced the standardized silver rupiya as part of a gold, silver and copper coin system.
2. **Akbar:** Akbar refined and expanded Mughal coinage after inheriting a currency system that already included the rupiya, so he was not the originator.
3. **Ala ud din Khilji:** He is remembered for strict market and price control measures in the Delhi Sultanate, not for the rupiya.
4. **Mohammed Shah Tughlaq:** Muhammad bin Tughlaq's claim to fame in currency is the failed token currency experiment with copper coins, a separate and unrelated episode.

Since the standardized silver rupiya first appears under Sher Shah Suri's administrative reforms, option (A) is the answer.

Let's summarize:

- Sher Shah Suri created the tri metallic currency system with the silver rupiya at its center.
- Akbar continued this system rather than starting it, and the other two rulers are linked to different currency episodes.

So Sher Shah Suri is the correct answer for the first rupiya.

Quick Tip: Think of the 16th century ruler known for his tri metallic currency and administrative reforms.

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6. One of the following allows an individual to start and continue to share regularly any of his/her own personal experience, knowledge, opinion or thought with the internet community?

- (A) Portal
- (B) Email
- (C) Blog
- (D) Chat

Correct Answer: (C) Blog

SOLUTION:

The question is describing a specific kind of online platform, so the fastest way to answer is to test each option against the key words: individual, regular, and internet community.

1. **Portal:** A portal such as a news or search portal gathers links and content from many sources, it is not one person's personal, repeated posting space.
2. **Email:** Email sends a message to chosen recipients directly, so it is private communication rather than open, ongoing sharing with a wider community.
3. **Blog:** Correct. A blog is a personal website or page where someone regularly publishes posts about their experiences, knowledge or opinions, and it stays open for the internet community to read and comment on.
4. **Chat:** Chat is instant and typically one to one or in small private groups, built for quick conversation, not for building an archive of public posts.

Because a blog is the only option built for one person's continuing, public posting, option (C) is correct.

Let's summarize:

- Blogs are public, ongoing, and centered on one author's regular posts.
- Portals, email and chat serve different purposes such as aggregation or private messaging.

So blog is the right answer.

Quick Tip: Think of the online personal diary format that anyone on the internet can read and comment on.

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7. Phishing is

- (A) A Govt. plan
- (B) A stem cell
- (C) A fraudulent way of getting the PIN and bank passwords using emails
- (D) None of these

Correct Answer: (C) A fraudulent way of getting the PIN and bank passwords using emails

SOLUTION:

This question checks basic awareness of common cyber security terms, specifically what phishing means and how it works.

1. **A Govt. plan:** Phishing is a form of online crime, not any kind of official government scheme, so this option makes no sense.

2. **A stem cell:** This is a term from biology related to cell development, completely unrelated to internet fraud.
3. **A fraudulent way of getting the PIN and bank passwords using emails:** Correct. Attackers send emails that look like they come from a genuine bank or service, and trick people into entering their PIN, password or card details on fake pages.
4. **None of these:** Incorrect, since option three already gives an accurate description of phishing.

Because phishing works exactly through deceptive emails that steal banking credentials, option (C) correctly defines it.

Let's summarize:

- Phishing uses fake emails or links to steal sensitive information like PINs and passwords.
- The other options describe unrelated or biological concepts and do not fit the definition.

So the correct definition of phishing is given by option (C).

Quick Tip: Think of fake emails pretending to be from your bank, asking you to confirm your password or PIN.

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8. In the sports world, the sobriquet 'Indo-Pak Express' is applied to

- (A) Shree Santh and Shoaib Akhtar
- (B) Rohan Bopanna and Aisam-Ul-Haq Qureshi
- (C) Sania Mirza and Shahar Peer
- (D) Rohan Bopanna and Shahar Peer

Correct Answer: (B) Rohan Bopanna and Aisam-Ul-Haq Qureshi

SOLUTION:

This question is about a well known tennis doubles nickname built around the idea of an Indian and a Pakistani player teaming up.

1. **Shree Santh and Shoaib Akhtar:** Both are cricketers, Sreesanth from India and Shoaib Akhtar from Pakistan, but they never played as a paired team carrying this nickname.
2. **Rohan Bopanna and Aisam-Ul-Haq Qureshi:** Correct. This Indian and Pakistani tennis duo played doubles together and earned the nickname Indo-Pak Express, symbolizing cooperation between the two nations.
3. **Sania Mirza and Shahar Peer:** Sania Mirza is Indian, but Shahar Peer is from Israel, not Pakistan, so this pairing cannot carry an Indo-Pak label.
4. **Rohan Bopanna and Shahar Peer:** Bopanna is Indian, but again Shahar Peer's nationality is Israeli, so this option fails the same nationality check.

Only the Bopanna-Qureshi doubles pair actually matches an Indian teamed with a Pakistani, which is exactly what the Indo-Pak Express label describes, so option (B) is correct.

Let's summarize:

- The Indo-Pak Express nickname belongs to tennis, not cricket.
- Rohan Bopanna (India) and Aisam-Ul-Haq Qureshi (Pakistan) are the actual pair behind the name.

So Bopanna and Qureshi are the correct answer.

Quick Tip: Look for the tennis doubles pair, one Indian and one Pakistani, famous for playing together despite the two countries' rivalry.

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9. A film that has not been directed by Mira Nair is

- (A) Earth
- (B) Monsoon Wedding
- (C) Kamasutra
- (D) Salaam Bombay

Correct Answer: (A) Earth

SOLUTION:

Step 1: Understanding the Question.

We need to pick the one film among four that was NOT made by Mira Nair, so the fastest route is to sort the titles by their actual director rather than by trying to recall Mira Nair's full list first.

Step 2: Key Approach.

Group the films by director. Three of these titles share one director; the fourth belongs to someone else. Spotting the odd filmmaker out solves the question directly.

Step 3: Detailed Explanation.

Salaam Bombay (1988) launched Mira Nair's career and got an Oscar nomination for Best Foreign Language Film. Kamasutra: A Tale of Love (1996) is also her work, a period romance set in 16th century India.

Monsoon Wedding (2001) is her best-known film internationally, following a big fat Punjabi wedding, and it won the Golden Lion at Venice.

Earth (1998), on the other hand, is directed by Deepa Mehta, and it forms the middle chapter of her Fire-Earth-Water Elements Trilogy. Mira Nair had no involvement in Earth.

Step 4: Final Answer.

Since three films trace back to Mira Nair and Earth traces back to Deepa Mehta, Earth is the film not directed by Mira Nair.

Quick Tip: Three of the four titles share the same director; find which one belongs to a different filmmaker (Deepa Mehta's Elements Trilogy).

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10. In banking terminology, CRR means

- (A) Credit Reserve Ratio
- (B) Cash Reserve Ratio
- (C) Credit Rating Ratio
- (D) Cash Rating Ratio

Correct Answer: (B) Cash Reserve Ratio

SOLUTION:

CRR is a short form that shows up often in economics and banking exams, so it helps to break the term itself apart rather than just memorise it.

1. **Credit Reserve Ratio:** There is no such official term in RBI monetary policy. This option mixes up "credit" with the correct word "cash".
2. **Cash Reserve Ratio:** This is the real term. Banks in India must set aside a fixed percentage of their deposits as cash reserves with the RBI, and this percentage is the CRR.
3. **Credit Rating Ratio:** Credit rating is about how trustworthy a borrower is when it comes to repaying debt, worked out by agencies like CRISIL or Moody's. It has nothing to do with reserve requirements.
4. **Cash Rating Ratio:** This phrase does not exist in banking; it is a distractor built by swapping words around.

Cash Reserve Ratio directly controls how much a bank can lend, since a higher CRR locks away more cash and a lower CRR releases more cash into the system. This makes it a key lever the RBI pulls to control inflation and liquidity.

Let's summarize:

- CRR = Cash Reserve Ratio, a portion of deposits banks must hold with the RBI in cash.
- Raising CRR reduces lendable funds; lowering CRR increases them.

So the correct expansion of CRR is Cash Reserve Ratio, option (B).

Quick Tip: Think of the "C" in CRR as standing for the physical cash banks must park with the RBI, not credit.

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11. Some of the large deals entered into by IT majors in India (all are billion dollar deals) are listed here as options. Which one is not?

- (A) TCS-Nielson
- (B) Tech Mahindra-BT
- (C) Infosys-BN AM O
- (D) IBM-Bharti

Correct Answer: (C) Infosys-BN AM O

SOLUTION:

This is a pure recall question about landmark IT outsourcing contracts from the mid-2000s, so the fastest way through it is process of elimination using what is confirmed and widely reported.

1. **TCS-Nielson:** Confirmed. Tata Consultancy Services and Nielsen entered a large, multi-year BPO and technology contract that ran into billions of dollars over its life.
2. **Tech Mahindra-BT:** Confirmed. Tech Mahindra was born out of British Telecom's outsourcing needs, and BT remained a client generating billions in cumulative business over the years.
3. **Infosys-BN AM O:** Not a confirmed billion-dollar deal. Nothing in Infosys's known billion-dollar contract history lines up cleanly with this pairing, which sets it apart from the other three options.
4. **IBM-Bharti:** Confirmed. IBM's ten-year IT infrastructure management deal with Bharti Airtel, signed in the mid-2000s, was reported at roughly a billion dollars.

Three of the four options describe deals that are firmly established in business reporting from that period. The one that breaks the pattern is the Infosys pairing, since it cannot be matched to a genuine, confirmed billion-dollar contract.

Let's summarize:

- TCS-Nielsen, Tech Mahindra-BT, and IBM-Bharti are all real, well-documented billion-dollar IT deals.
- The Infosys pairing does not match any confirmed billion-dollar contract from that era.

So the deal that is not genuine on this list is option (C).

Quick Tip: Three of the four pairings are real, widely reported billion-dollar contracts from the mid-2000s; one name does not match any confirmed deal.

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12. Suicide car bomb caused havoc in England in July 2007 at which airport?

- (A) Glasgow
- (B) Heathrow
- (C) Birmingham
- (D) Nottingham

Correct Answer: (A) Glasgow

SOLUTION:

This question tests a specific news event from 2007, so the best way to answer it is to recall the actual location reported at the time rather than guess by airport size.

1. **Glasgow:** Correct. A burning Jeep packed with gas canisters was driven into the terminal entrance of Glasgow Airport, an attack that followed a foiled car-bomb plot in London by less than a day.
2. **Heathrow:** Incorrect. Though Heathrow is the UK's largest and most talked-about airport, it was not where this attack took place.
3. **Birmingham:** Incorrect. Birmingham Airport had no connection to this event.
4. **Nottingham:** Incorrect. Nottingham is not even known for a major international airport and is unrelated to the incident.

The correct location, Glasgow, stands out because news coverage at the time closely tied it to the failed London car-bomb attempt from the day before, making the two events part of the same short-lived plot.

Let's summarize:

- The burning vehicle attack on 30 June/1 July 2007 struck Glasgow Airport's terminal building.
- It followed a foiled car-bomb plot in central London by less than 24 hours.

So the correct airport is Glasgow, option (A).

Quick Tip: This attack happened just a day after a failed car-bomb plot in London, and it targeted a Scottish airport, not an English one.

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13. Pakistan has signed Free Trade Agreement (FTA) and a five-year investment package with

- (A) USA
- (B) European Union
- (C) China
- (D) Russia

Correct Answer: (C) China

SOLUTION:

This question is about Pakistan's foreign trade policy in the mid-2000s, and the safest approach is to match each option against what is actually documented for that period.

1. **USA:** The US and Pakistan traded heavily, but there was no comprehensive Free Trade Agreement signed between them during this time.
2. **European Union:** The EU extended trade concessions to Pakistan through preferential tariff schemes, not through a formal bilateral FTA.
3. **China:** This is the correct answer. Pakistan and China signed an FTA in 2006 that took effect in 2007, and it came bundled with a five-year package of Chinese investment commitments, part of a broader pattern of deepening Pakistan-China economic cooperation.
4. **Russia:** Pakistan-Russia trade ties existed but stayed modest through this period, without any FTA of the scale described in the question.

China stands out clearly because the FTA with Pakistan was a specific, named agreement (unlike the looser preferential arrangements with the EU) and it explicitly included the five-year investment package mentioned in the question.

Let's summarize:

- Pakistan-China FTA was signed in 2006 and enforced from 2007.
- It came with a five-year investment package, distinguishing it from the general trade relationships Pakistan had with the USA, EU, and Russia.

So the correct partner country is China, option (C).

Quick Tip: Look for the trade partner that gave Pakistan a formally named FTA plus a specific five-year investment commitment, not just general trade ties.

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14. Major oil finds in India have been reported in

- (A) Krishna Godavari Basin
- (B) Cauvery Basin
- (C) Rajasthan Desert
- (D) Lower Assam Valley

Correct Answer: (A) Krishna Godavari Basin

SOLUTION:

This is a geography and current-affairs style question about India's petroleum sector, so it helps to rank the four basins by how significant and recent their finds were.

1. **Krishna Godavari Basin:** Correct. This basin off Andhra Pradesh's coast became famous after Reliance Industries struck a huge natural gas reserve there (the KG-D6 block) in the early 2000s, making it the standout hydrocarbon story of that decade.
2. **Cauvery Basin:** This basin does have oil and gas potential, but its output and discoveries were on a much smaller scale, so it does not fit the description of "major" finds.
3. **Rajasthan Desert:** The Barmer oilfields discovered here by Cairn India were significant for onshore Indian oil, but they were smaller in scale and impact compared to the KG Basin gas discovery.
4. **Lower Assam Valley:** This region is home to some of India's oldest oilfields, dating back to the colonial era, so it does not represent a "major" recent find as asked in the question.

Comparing the four choices, the Krishna Godavari Basin clearly stands out as the site of the largest and most talked-about hydrocarbon discovery of the period, dwarfing the other three in scale and media attention.

Let's summarize:

- KG Basin became India's top hydrocarbon story after Reliance's gas discovery in the early 2000s.
- Cauvery, Rajasthan, and Assam all have oil history, but none matched KG Basin's scale during this period.

So the correct answer is Krishna Godavari Basin, option (A).

Quick Tip: Think of the offshore basin linked to Reliance's landmark natural gas discovery in the early 2000s.

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15. The propagation of radio signals is greatly influenced by

- (A) Troposphere
- (B) Ionosphere
- (C) Exosphere
- (D) Thermosphere

Correct Answer: (B) Ionosphere

SOLUTION:

This is a basic physical geography question about the Earth's atmosphere, and it helps to think about what property a layer needs to interact with radio waves.

1. **Troposphere:** This is the layer closest to the ground, where clouds form and weather happens, but it does not contain the charged particles needed to bounce radio waves back to Earth.
2. **Ionosphere:** Correct. This layer is ionised by the Sun's radiation, giving it free electrons and ions that reflect radio waves, especially shortwave signals, allowing them to travel around the curve of the Earth rather than shooting off into space.
3. **Exosphere:** This is the outermost fringe of the atmosphere, so thin that it barely counts as air; it has no meaningful effect on radio signals.
4. **Thermosphere:** While the ionosphere physically sits within the thermosphere's altitude range, the radio-reflecting property comes specifically from ionisation, which is why the ionosphere gets credit for this effect rather than the thermosphere as a whole.

The key idea to remember is the word "ionosphere" itself: ions in this layer are what reflect and refract radio waves, letting broadcasters send signals over hundreds or thousands of kilometres using skywave propagation.

Let's summarize:

- The ionosphere contains charged particles that reflect radio waves back toward Earth.
- Troposphere, exosphere, and thermosphere do not provide this specific ionisation-based reflection.

So the correct layer is the ionosphere, option (B).

Quick Tip: Match the word "ionosphere" with "ions", the charged particles that bounce radio waves back down to Earth.

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16. According to Dun and Bradstreet which one of the following is the largest employer among Indian ITeS and BPO companies?

- (A) Genpact
- (B) Accenture Services
- (C) Wipro BPO
- (D) IBM Daksh

Correct Answer: (A) Genpact

SOLUTION:

This question tests recall of a specific industry ranking from a Dun and Bradstreet report on India's BPO sector around 2006 to 2007, so it helps to think about each company's background and scale.

1. **Genpact:** Correct. Originally GE's in-house outsourcing arm (GE Capital International Services) before becoming independent, Genpact had grown into the largest headcount among Indian BPO and ITeS firms by this period, covering services like finance and accounting outsourcing at massive scale.
2. **Accenture Services:** A large global consulting and outsourcing firm with a sizeable India workforce, but its BPO headcount in India was smaller than Genpact's at the time of this ranking.
3. **Wipro BPO:** An established Indian BPO arm under the Wipro group, employing many people, but again not enough to top the Dun and Bradstreet list.
4. **IBM Daksh:** Formed when IBM took over the Indian BPO company Daksh eServices, this unit had a solid workforce but still ranked below Genpact in total employee count.

The distinguishing detail here is Genpact's origin story: because it started life as GE's captive back-office unit before spinning out, it had years of head start in scaling up its India operations before this survey was conducted, which explains why it topped the list.

Let's summarize:

- Genpact grew out of GE Capital International Services and became independent, building the largest India BPO headcount by the mid-2000s.
- Accenture Services, Wipro BPO, and IBM Daksh were all major players but ranked below Genpact in employee numbers.

So according to Dun and Bradstreet, the largest employer was Genpact, option (A).

Quick Tip: This company started as GE's own captive back-office unit before spinning off independently, giving it a head start in headcount over its BPO rivals.

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17. "In God we trust, the rest have to bring data on the table." This statement was made by the famous industrialist

- (A) J.R.D. Tata
- (B) Aditya Birla
- (C) Dhirubhai Ambani
- (D) Narayan Murthy

Correct Answer: (D) Narayan Murthy

SOLUTION:

This question checks whether the student can match a well known corporate quote to the industrialist who said it. The line "In God we trust, the rest have to bring data on the table" is a management saying about backing decisions with evidence instead of gut feeling.

1. **J.R.D. Tata:** Remembered for leading the Tata Group for decades and for pioneering employee welfare schemes in Indian industry. He is not the source of this quote.
2. **Aditya Birla:** Known for growing the family business into a large industrial group, later renamed the Aditya Birla Group in his memory. This quote is not linked to him.
3. **Dhirubhai Ambani:** Founder of Reliance Industries, famous for his risk taking and stock market strategy, not for this data driven management line.
4. **Narayan Murthy:** Co-founder of Infosys and a strong voice for corporate governance in Indian IT. He has used this exact line to stress that decisions in his company were made on facts and figures, not assumptions.

The quote is attributed to Narayan Murthy, so option (D) is correct.

Let's summarize:

- The quote is a call for evidence based decision making in business.
- Narayan Murthy built Infosys around exactly this principle of governance and data driven decisions.

Hence, the industrialist behind the statement is Narayan Murthy.

Quick Tip: Think of the Infosys co-founder known for stressing transparency and fact based decisions in corporate governance.

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18. The runner-up in the recent Vice-Presidential election was

- (A) Mr. Bhairon Singh Shekhawat
- (B) Dr. Najma Heptullah
- (C) Mr. Praful Patel
- (D) Mr. Hameed Ansari

Correct Answer: (B) Dr. Najma Heptullah

SOLUTION:

The question tests recall of the 2007 Vice-Presidential election result, specifically who lost the contest to the eventual winner.

1. **Mr. Bhairon Singh Shekhawat:** He was India's sitting Vice-President before this election but did not contest it again, so he cannot be the runner-up here.
2. **Dr. Najma Heptullah:** She stood as the NDA's candidate against Hamid Ansari and lost the contest, which makes her the runner-up.
3. **Mr. Praful Patel:** A Union Cabinet minister at the time, he was never a candidate in this election.
4. **Mr. Hameed Ansari:** He is the person who won the election, not the runner-up.

Since Hamid Ansari won and Najma Heptulla was the losing candidate, she is correctly called the runner-up, confirming option (B).

Let's summarize:

- Hamid Ansari won the 2007 Vice-Presidential election.
- Najma Heptulla, the NDA nominee, finished second and is the runner-up.

So the answer is Dr. Najma Heptullah.

Quick Tip: Recall who contested against Hamid Ansari in the 2007 Vice-Presidential race and lost.

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19. Which of the following is not provided in the constitution?

- (A) Election Commission
- (B) Planning Commission
- (C) Public Service Commission
- (D) Finance Commission

Correct Answer: (B) Planning Commission

SOLUTION:

This question checks which of these four bodies is a constitutional body, that is, created directly by the Constitution of India, and which one is not.

1. **Election Commission:** Created under Article 324 of the Constitution to conduct free and fair elections, so it is a constitutional body.
2. **Planning Commission:** Never mentioned in the Constitution. It was formed in 1950 through a Cabinet resolution and worked as an advisory planning body until it was replaced by the NITI Aayog in 2015.
3. **Public Service Commission:** The Union and State Public Service Commissions are set up under Articles 315 to 323, making them constitutional bodies.
4. **Finance Commission:** Set up under Article 280 to recommend how tax revenue is shared between the Centre and the States, so it too is a constitutional body.

Since the Election Commission, Public Service Commission and Finance Commission each trace back to a specific Article, while the Planning Commission does not appear in the Constitution at all, option (B) is the odd one out.

Let's summarize:

- Constitutional bodies here are the Election Commission, Public Service Commission, and Finance Commission.
- The Planning Commission was only an executive creation, never a constitutional one.

So the body not provided in the Constitution is the Planning Commission.

Quick Tip: Match each body to its Article; the one with no Article behind it was only formed by a government resolution.

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20. When did Governor General's rule end in India?

- (A) 15th August 1947
- (B) 9th August 1948
- (C) 26th January 1950
- (D) 2nd October 1950

Correct Answer: (C) 26th January 1950

SOLUTION:

The question is really asking when India stopped being a dominion with a Governor General and became a full republic with a President.

1. **15th August 1947:** This is India's Independence Day, but India remained a dominion under a Governor General after this date, so the Governor General's post did not end here.
2. **9th August 1948:** No constitutional change of this kind happened on this date, it is only a distractor.
3. **26th January 1950:** This is the date the Constitution of India came into force. India became a republic, the office of Governor General was abolished, and Dr. Rajendra Prasad became the first President.
4. **2nd October 1950:** This date has no link to the transition from Governor General to President; it is another distractor date.

Only 26th January 1950 marks the actual end of the Governor General system and the start of the presidential system, so option (C) is correct.

Let's summarize:

- 1947 to 1950, India was a dominion headed by a Governor General.
- 26th January 1950 is Republic Day, when the Governor General's post ended and the President took over.

So the Governor General's rule ended on 26th January 1950.

Quick Tip: Separate independence day from the day India actually became a republic with a President.

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21. The newspaper which was recently voted as the largest selling newspaper in the world is

- (A) The Los Angeles Times
- (B) The Times of India
- (C) The London Times
- (D) The New York Times

Correct Answer: (B) The Times of India

SOLUTION:

This question is about circulation figures, that is, the number of copies sold per day, rather than about a newspaper's age or reputation.

1. **The Los Angeles Times:** A leading American paper, but its daily circulation is well below that of a national Indian daily with editions in many cities.
2. **The Times of India:** Backed by a huge English reading population across India and multiple city editions, it recorded the highest daily sales among English language papers worldwide around this period.
3. **The London Times:** Carries great prestige in Britain, but its circulation is a fraction of The Times of India's, since the UK market is far smaller than India's.
4. **The New York Times:** Highly influential in journalism and often quoted worldwide, yet it too sells fewer physical copies each day than The Times of India.

Comparing raw daily sales, The Times of India comes out ahead of the other three, which matches the survey mentioned in the question. Option (B) is correct.

Let's summarize:

- Circulation, not reputation, decides "largest selling."
- The Times of India's enormous domestic readership took it past the American and British papers listed here.

So the largest selling newspaper in the world at that time was The Times of India.

Quick Tip: Think in terms of copies sold per day, and remember India's huge English reading population.

• • •

22. Which of the following countries is the top source of FDI inflows into India at present?

- (A) Singapore
- (B) USA
- (C) UK
- (D) Mauritius

Correct Answer: (D) Mauritius

SOLUTION:

This question is really about tax treaties and how they shape recorded FDI numbers, not about which country has the biggest economy.

1. **Singapore:** Also a treaty-based routing hub for investment into India, and growing in importance, but ranked behind Mauritius during this period.
2. **USA:** A major economic partner of India with large direct investment, yet its officially recorded FDI share was smaller than that routed through Mauritius.
3. **UK:** Historic and strong investment ties with India, but again its FDI share trailed Mauritius at this time.
4. **Mauritius:** Thanks to the India-Mauritius Double Taxation Avoidance Agreement, capital gains on investments routed through Mauritius escaped Indian tax, making it the preferred conduit for investors and the top source of recorded FDI into India.

Because so much investment, including money from other countries, chose to enter India via Mauritius purely for the tax benefit, Mauritius topped the FDI source list, confirming option (D).

Let's summarize:

- The India-Mauritius DTAA made Mauritius a low-tax gateway for FDI.
- This tax advantage, not the size of the Mauritian economy, explains why it outranked USA, UK, and Singapore as an FDI source.

So the top source of FDI inflows into India at that time was Mauritius.

Quick Tip: Think about which country's tax treaty with India made it a favourite route for investment, not which country is economically biggest.

• • •

23. The human cell contains

- (A) 44 chromosomes
- (B) 48 chromosomes
- (C) 46 chromosomes
- (D) 23 chromosomes

Correct Answer: (C) 46 chromosomes

SOLUTION:

This question tests basic knowledge of the human chromosome number, and the trap is confusing the diploid body-cell number with the haploid number found in reproductive cells.

1. **44 chromosomes:** This would mean a pair is missing from the normal set, which is not the case for a healthy human cell.
2. **48 chromosomes:** This is the diploid chromosome number of some great apes, such as chimpanzees, not of humans.
3. **46 chromosomes:** This is the correct diploid number for a normal human body (somatic) cell, made up of 23 pairs, one member of each pair from the mother and one from the father.
4. **23 chromosomes:** This is only the haploid number, found in a single sperm cell or a single egg cell before fertilisation, not in an ordinary body cell.

Since a normal human body cell is diploid and carries 23 pairs of chromosomes, the total is 46, which makes option (C) correct.

Let's summarize:

- Body (somatic) cells are diploid: 46 chromosomes in 23 pairs.
- Sperm and egg cells are haploid: 23 chromosomes each, before they combine at fertilisation.

So the human cell contains 46 chromosomes.

Quick Tip: Remember the difference between a body cell (diploid) and a sperm or egg cell (haploid).

• • •

24. In year 2006, the three largest economies in the world were

- (A) USA, Japan & Germany
- (B) USA, China & Japan
- (C) USA, UK & Germany
- (D) USA, UK & France

Correct Answer: (A) USA, Japan & Germany

SOLUTION:

This question hinges on getting the exact year right, since the global GDP rankings shifted soon after 2006 when China's economy overtook Germany's.

1. **USA, Japan and Germany:** This matches the nominal GDP ranking for 2006, when the US was first, Japan was second, and Germany was third.
2. **USA, China and Japan:** This ranking only became true from 2007 onward, once China's economy passed Germany's in size, so it does not describe 2006.
3. **USA, UK and Germany:** The UK's economy, while large, was smaller than Japan's in 2006, so the UK does not belong in the top three that year.
4. **USA, UK and France:** Neither the UK nor France had a bigger economy than Japan or Germany in 2006, so this option leaves out both of the correct second and third place economies.

Checking the actual 2006 nominal GDP figures confirms the order was USA, then Japan, then Germany, which makes option (A) correct.

Let's summarize:

- 2006 ranking: USA first, Japan second, Germany third by nominal GDP.
- China only moved into third place, ahead of Germany, starting in 2007.

So in 2006 the three largest economies were USA, Japan and Germany.

Quick Tip: Remember China overtook Germany only in 2007, so in 2006 the podium was still USA, Japan, Germany.

• • •

25. Identify an entry that is reversed in terms of the forex rates for US Dollar on a day recently.

- (A) 1 US \$ = Rs. 39.35
(B) 1 US \$ = € 1.42
(C) 1 US \$ = £ 0.48
(D) 1 US \$ = ¥ 114

Correct Answer: (B) 1 US \$ = € 1.42

SOLUTION:

Step 1: Understanding the Question:

We are given four currency quotes, all written in the form "1 US Dollar equals X units of another currency." One of these four is written backwards, meaning the stronger and weaker currency have been swapped in the equation. We need to spot which one.

Step 2: Key Formula or Approach:

A currency that is stronger than the US dollar needs less than one unit to match one dollar, so the number quoted per dollar should be less than 1. A currency that is weaker than the dollar needs many units to match one dollar, so the number quoted per dollar should be a large number, well above 1. Compare each quoted number against this rule using known real-world currency strength around that period.

Step 3: Detailed Explanation:

Take the rupee first: 1 US

= Rs.39.35. *The rupee is much weaker than the dollar, so it should take about 39 to 40 rupees to equal one dollar. This matches the rule, so it is correct.*

: 1 US = £ 0.48. The pound is stronger than the dollar, roughly twice as strong, so one dollar should equal under half a pound. 0.48 fits that, so this is also correct.

Take the yen: 1 US **Misplaced &** = € 1.42. The euro is a stronger currency than the dollar, and one euro actually buys about 1.35 to 1.42 dollars. That means the correct statement is "1 Euro = 1.42 US Dollars," not "1 US Dollar = 1.42 Euros." Writing it as 1 US \$ = 1.42 Euro puts the stronger currency's larger number on the wrong side, which reverses the true relationship.

Step 4: Final Answer:

Since the rupee, pound, and yen entries all follow the expected stronger and weaker currency pattern correctly, and only the euro entry has the relationship flipped, the reversed entry is option (B), "1 US \$ = € 1.42".

Quick Tip: Compare each currency's real-world strength against the dollar: a stronger currency should need less than 1 unit per dollar, not more.

• • •

26. Starbucks, the coffee chain retailer's name is inspired from which book?

- (A) The Scarlet Letter
- (B) Moby Dick
- (C) Uncle Tom's Cabin
- (D) None of the above

Correct Answer: (B) Moby Dick

SOLUTION:

Step 1: Understanding the Concept:

This is a straightforward brand-trivia question asking us to recall which classic novel gave Starbucks its name.

Step 2: Key Formula or Approach:

Starbucks was founded in Seattle in 1971 by three partners who wanted a name linked to the early history of coffee trading by sea. They looked to classic maritime literature for inspiration rather than inventing an artificial brand word.

Step 3: Detailed Explanation:

In Herman Melville's novel Moby Dick, the ship Pequod sails under Captain Ahab, and its first mate is a steady, sensible character named Starbuck. The founders of the coffee company felt this name captured the seafaring, trading spirit tied to coffee's history, so they adapted it into "Starbucks" for their new company. None of the other listed novels, The Scarlet Letter or Uncle Tom's Cabin, involve a character or setting connected to coffee trade or shipping in this way, so they can be ruled out directly.

Step 4: Final Answer:

The Starbucks name comes from the first mate Starbuck in Moby Dick, so option (B) is correct.

Quick Tip: Think of the first mate on Captain Ahab's ship in a famous whaling novel.

• • •

27. A major US toy manufacturer which suffered a breakdown in supply chain from China on account of legally unacceptable toxic substances in its products is

- (A) Leo Toys
- (B) Mattel Toys
- (C) Universal Toys
- (D) Funskool Toys

Correct Answer: (B) Mattel Toys

SOLUTION:

Step 1: Understanding the Question:

We need to identify which major US toy company had a supply-chain crisis in 2007 tied to unsafe, toxic materials used by its Chinese manufacturing partners.

Step 2: Key Formula or Approach:

Recall recent (as of 2007) major consumer-safety recalls reported in business news. The scale of the recall, millions of units, and the specific defect, lead-based paint, are the two clues that should point to one well-known name.

Step 3: Detailed Explanation:

Mattel Inc., the company behind Barbie dolls and Fisher-Price toys, discovered in 2007 that several of its Chinese contract factories had used paint containing lead, a substance banned in children's toys under US law because of its toxicity. Mattel had to pull millions of toys off shelves across multiple recalls that year, and a separate issue involving small magnets added to the crisis. This event severely damaged trust in Mattel's outsourced manufacturing process in China. None of the other three names, Leo Toys, Universal Toys, or Funskool Toys, match this scale or this specific 2007 event; Funskool is in fact an Indian company, not American.

Step 4: Final Answer:

The toy company that suffered this supply-chain breakdown due to toxic substances is Mattel Toys, option (B).

Quick Tip: Think of the maker of Barbie and Fisher-Price toys that recalled millions of China-made products over lead paint in 2007.

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28. Bollywood name has been granted as a trademark to which US-based Media and Entertainment company by Indian Trademark Registry?

- (A) Viacom
- (B) Universal Studios
- (C) Disney Enterprises
- (D) Miramax

Correct Answer: (C) Disney Enterprises

SOLUTION:**Step 1: Understanding the Concept:**

This question checks awareness of a specific intellectual property news item: an American media company registering the word "Bollywood" as a trademark with the Indian Trademark Registry.

Step 2: Key Formula or Approach:

Match the four given US entertainment companies against the one that is specifically documented as having secured this trademark right in India, and rule out the others based on their known areas of business.

Step 3: Detailed Explanation:

Of the four options, Viacom is primarily known for cable television brands, Universal Studios for Hollywood film production, and Miramax for independent film distribution, none of which match the specific trademark event

being asked about. The company that actually secured trademark rights over "Bollywood" in India was Disney Enterprises, the corporate entertainment and media arm of the Walt Disney Company. This grant meant Disney held exclusive rights to commercially use the term "Bollywood" within India, even though the word is popularly used to describe the entire Hindi film industry, which led to public debate about whether such a generic cultural term should belong to any single foreign company.

Step 4: Final Answer:

The company granted the "Bollywood" trademark by the Indian Trademark Registry is Disney Enterprises, option (C).

Quick Tip: Think of the US media giant behind Mickey Mouse that drew criticism for trademarking a word used for the whole Hindi film industry.

...

29. Lakshmi Mittal, the famous NRI industrialist, is partnering with Govt. of India for which of the following big projects?

- (A) Oil Refinery
- (B) Atomic Power Plant
- (C) Biotechnology
- (D) Mining

Correct Answer: (A) Oil Refinery

SOLUTION:

Step 1: Understanding the Question:

We are asked to identify the specific big project for which NRI industrialist Lakshmi Mittal partnered with the Government of India.

Step 2: Key Formula or Approach:

Separate Mittal's general known business, steel manufacturing, from the specific new venture referenced in the news at the time. The question is about a distinct partnership project, not his everyday steel operations.

Step 3: Detailed Explanation:

Lakshmi Mittal, chairman of what became ArcelorMittal, is globally known as a steel tycoon. Around 2007, his business interests broadened to include energy projects in India, and he entered discussions with the Government of India to help set up a large oil refinery, responding to the country's growing fuel demand and refining capacity needs. This was reported as a notable move beyond his traditional steel business. Atomic power and biotechnology have no link to his documented business dealings, so those options can be eliminated immediately. Mining is closely tied to his steel operations because steel needs iron ore, but the specific big government partnership asked about in this question is the oil refinery project, not a mining deal.

Step 4: Final Answer:

The project for which Lakshmi Mittal partnered with the Government of India is the oil refinery project, option (A).

Quick Tip: Look beyond Mittal's steel business to the energy-sector partnership he formed with the government around 2007.

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30. Tyeb Mehta, Nand Lal Bose and Majit Bewa are

- (A) Classical Singers
- (B) English Poets
- (C) Photographers
- (D) Painters

Correct Answer: (D) Painters

SOLUTION:

Step 1: Understanding the Concept:

This question tests recognition of a shared profession among three named individuals from Indian cultural history.

Step 2: Key Formula or Approach:

Recall each name's field of work individually, then find the common thread linking all three.

Step 3: Detailed Explanation:

Tyeb Mehta was a modern Indian painter, part of the influential Bombay Progressive Artists' Group formed after independence, and his paintings, often on themes like the falling figure or Kali, are highly prized in Indian art auctions. Nandalal Bose was one of the earliest major modern Indian painters, trained under Abanindranath Tagore, who worked at Santiniketan and famously illustrated the original handwritten copy of the Indian Constitution. Manjit Bawa was known for his distinctive style using flat, bright colours and mythological or folk themes, becoming one of India's most recognised contemporary painters. Music, poetry, and photography do not describe the primary work of any of these three names, so those categories can each be ruled out.

Step 4: Final Answer:

All three, Tyeb Mehta, Nandalal Bose, and Manjit Bawa, are Painters, making option (D) correct.

Quick Tip: Think of the shared art form behind these three well-known Indian names: canvas and colour, not music or the written word.

• • •

31. Zapak Digital Entertainment (a gaming venture) belongs to which business group?

- (A) UTV
- (B) Balaji Telefilm
- (C) Zee TV
- (D) Anil Dhirubhai Ambani Enterprises

Correct Answer: (D) Anil Dhirubhai Ambani Enterprises

SOLUTION:

Step 1: Understanding the Question:

We need to identify the business group that owned Zapak Digital Entertainment, an online gaming venture from the mid-2000s.

Step 2: Key Formula or Approach:

Match the venture to the parent conglomerate by recalling which large Indian business house was actively expanding into digital and gaming businesses at the time Zapak launched.

Step 3: Detailed Explanation:

Zapak was launched in 2006 as an online gaming portal aimed at India's growing internet-using youth population. It was promoted by the Reliance Anil Dhirubhai Ambani Group (Reliance ADAG), the business empire led by Anil Ambani after the split of the original Reliance group. This group was building a wide media and entertainment portfolio at the time, spanning telecom, broadcasting, and digital ventures, and Zapak fit into that digital entertainment push. UTV, Balaji Telefilm, and Zee TV are all significant Indian media companies, but their core businesses were films and television serials or broadcasting, and none of them owned Zapak.

Step 4: Final Answer:

Zapak Digital Entertainment belonged to Anil Dhirubhai Ambani Enterprises, option (D).

Quick Tip: Think of the business group led by Anil Ambani that was expanding into digital and gaming ventures in the mid-2000s.

• • •

32. In August 2007, Chennai High Court passed a landmark judgment that may have far reaching consequences on pharmaceuticals industry, dismissing a writ petition filed by

- (A) Ranbaxy
- (B) Sandoz
- (C) Novartis
- (D) Glaxo

Correct Answer: (C) Novartis

SOLUTION:**Step 1: Understanding the Concept:**

This question tests knowledge of a landmark 2007 Indian patent law case concerning pharmaceutical companies and generic medicine access.

Step 2: Key Formula or Approach:

Identify the pharmaceutical multinational that specifically fought against Section 3(d) of the Indian Patents Act in court over patent rights for a well-known cancer drug, and match it to the company named among the options.

Step 3: Detailed Explanation:

Section 3(d) of India's Patents Act, added in 2005, was designed to prevent "evergreening", where companies try to extend patent protection by making small, non-innovative tweaks to existing drugs. Novartis wanted an Indian

patent for Glivec, its brand name for imatinib mesylate, a drug used to treat certain types of cancer, but Indian authorities denied the patent under Section 3(d) because the drug was seen as a modified version of an already known compound. Novartis then filed a writ petition in the Madras High Court (based in Chennai) arguing that Section 3(d) was unconstitutional and violated global trade obligations under TRIPs. In August 2007, the court dismissed the petition, which meant Section 3(d) stood, and Indian generic manufacturers could continue producing affordable versions of many medicines, including cancer drugs. The other companies listed, Ranbaxy, Sandoz, and Glaxo, were not the petitioners in this specific writ case.

Step 4: Final Answer:

The company whose writ petition was dismissed by the Chennai High Court in August 2007 is Novartis, option (C).

Quick Tip: Think of the Swiss drugmaker that fought, and lost, a court battle over patent rights for its cancer drug Glivec in India.

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33. The busiest port in the world today is

- (A) Port of Rotterdam
- (B) Port of Shanghai
- (C) Port of Singapore
- (D) Port of Dubai

Correct Answer: (C) Port of Singapore

SOLUTION:

This question checks general awareness of world trade and shipping, specifically which port led the world in container traffic around 2007.

1. **Port of Rotterdam:** Europe's largest port by far, but its total container volume was smaller than that of the leading Asian ports, so it was not the world's busiest.
2. **Port of Shanghai:** A fast growing Chinese port that eventually became the world's busiest, but this shift happened only after 2010, later than the period this question refers to.
3. **Port of Singapore:** Sitting on the Malacca Strait shipping lane, Singapore was the world's top container port for most of the 2000s, acting as the main transshipment point between Europe, the Middle East, and East Asia.
4. **Port of Dubai:** A major regional hub in the Middle East, handling large cargo volumes, but not enough to rank as the world's busiest.

The correct option is Port of Singapore, since it led the world in container throughput at the time this paper was set.

Let's summarize:

- Port rankings are based on container throughput in TEUs.
- Singapore led the world through most of the 2000s before Shanghai took over after 2010.

So the world's busiest port, as referred to in this question, was the Port of Singapore.

Quick Tip: Think about which port led the world in container traffic before Shanghai overtook it after 2010.

• • •

34. In recent months the monks of Myanmar marched the streets of Yangon in hundreds

- (A) To spread the message of peace
- (B) To celebrate Buddha Purnima
- (C) To protest against the government that was ruling
- (D) To take the normal route for alms

Correct Answer: (C) To protest against the government that was ruling

SOLUTION:

This question is drawn from a major 2007 news event in Myanmar (Burma), where monks led large public demonstrations in Yangon.

1. **To spread the message of peace:** Monks do generally preach peace, but that everyday role does not explain why hundreds suddenly marched together in the streets during this specific period.
2. **To celebrate Buddha Purnima:** This is a religious festival marking Buddha's birth, unrelated to the political unrest happening in Myanmar at that time.
3. **To protest against the government that was ruling:** Correct. Steep fuel price hikes by the military junta triggered public anger, and monks stepped in to lead the marches, an event later called the Saffron Revolution.
4. **To take the normal route for alms:** Monks do walk daily to collect alms, but that is a quiet, routine activity, not a mass demonstration involving hundreds of monks marching together.

The correct option is that the monks marched to protest against the ruling government, since the fuel price hike and years of military rule had built up public frustration that the monks gave voice to.

Let's summarize:

- The 2007 monk led marches in Yangon are known as the Saffron Revolution.
- They were triggered by fuel price increases and broader anger at military rule, not by religious observance or alms collection.

So the monks marched through Yangon to protest against the government ruling Myanmar at that time.

Quick Tip: Recall the 2007 "Saffron Revolution" in Myanmar and what triggered it.

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35. To recover the national loss suffered by small investors in the IPO allotment scam from the National Securities Depository Services Ltd, Central Depository Services Ltd, and eight depository participants, a second interim order was passed by

- (A) SEBI
- (B) RBI
- (C) FMI
- (D) Supreme Court

Correct Answer: (A) SEBI

SOLUTION:

This question tests knowledge of the IPO allotment scam and which authority acted to protect small investors who lost out because of it.

1. **SEBI:** Correct. As India's securities market regulator, SEBI investigated the misuse of multiple demat accounts by a few operators to corner IPO shares meant for retail investors, and it passed interim orders against NSDL, CDSL, and the depository participants involved.
2. **RBI:** The Reserve Bank of India oversees banks and monetary policy. Depository participants and IPO allotments fall outside its direct jurisdiction.
3. **FMI:** This is not an established Indian financial regulatory body relevant to securities markets, so it does not fit here.
4. **Supreme Court:** The judiciary steps in mainly to hear appeals or disputes brought before it, not to issue the primary regulatory interim orders in a market matter like this one.

The correct option is SEBI, since it is the designated regulator for India's securities market and the body that actually passed the interim orders in this case.

Let's summarize:

- The IPO allotment scam involved misuse of demat accounts to unfairly grab retail investor shares.
- SEBI, as the securities market watchdog, passed interim orders against NSDL, CDSL, and the depository participants.

So the second interim order to recover the small investors' losses was passed by SEBI.

Quick Tip: Think about which regulator oversees India's stock and depository system.

• • •

36. Indian Broadcasting Service was renamed in 1936 as

- (A) Kshwani
- (B) Nabhowani
- (C) Doorwani
- (D) All India Radio

Correct Answer: (D) All India Radio

SOLUTION:

This question checks a fact about the history of radio broadcasting in India before independence.

1. **Kshwani:** Not a name that was ever officially used for India's state broadcasting service.
2. **Nabhowani:** Also not connected with the history of the Indian Broadcasting Service; it does not match any recorded renaming.
3. **Doorwani:** This name resembles Doordarshan, the name later given to Indian television broadcasting in 1959, but it was not the 1936 radio renaming.

4. **All India Radio:** Correct. In 1936, the Indian Broadcasting Service was formally renamed All India Radio, which remains India's national public radio broadcaster.

The correct option is All India Radio, the name adopted in 1936 and still in official use for India's public radio network.

Let's summarize:

- Radio broadcasting in India began under government control around 1930 as the Indian Broadcasting Service.
- It was renamed All India Radio in 1936, and later became popularly known as Akashvani from 1957.

So the Indian Broadcasting Service became All India Radio in 1936.

Quick Tip: This is the broadcaster now known by its Hindi name Akashvani.

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37. Which of the following is not a principal organ of the UNO?

- (A) General Assembly
- (B) Trusteeship Council
- (C) Security Council
- (D) World Health Organization

Correct Answer: (D) World Health Organization

SOLUTION:

This question is about the structure of the United Nations and the difference between its principal organs and its specialised agencies.

1. **General Assembly:** One of the six principal organs, made up of all UN member states, so this option is a principal organ and not the answer.
2. **Trusteeship Council:** Also one of the six principal organs, originally set up to supervise trust territories, so this too is not the answer.
3. **Security Council:** The organ responsible for peace and security decisions, one of the six principal organs, so it is not the answer either.
4. **World Health Organization:** Correct. WHO is a specialised agency that works closely with the UN on health issues, but it was not created as one of the six principal organs under the UN Charter.

The correct option is the World Health Organization, since bodies like WHO, UNESCO, and the IMF are specialised agencies linked to the UN, not its principal organs.

Let's summarize:

- The UN's six principal organs are the General Assembly, Security Council, Economic and Social Council, Trusteeship Council, International Court of Justice, and Secretariat.
- WHO, UNESCO, and similar bodies are specialised agencies, a separate category from the principal organs.

So the option that is not a principal organ of the UNO is the World Health Organization.

Quick Tip: Separate the UN's six founding organs from its specialised agencies like WHO.

...

38. Who was the composer of the classical composition 'Moonlight Sonata'?

- (A) Ludwig Van Beethoven
- (B) Joseph Haydn
- (C) Johann Bach
- (D) Handel

Correct Answer: (A) Ludwig Van Beethoven

SOLUTION:

This question is about a famous piece of Western classical music and the composer behind it.

1. **Ludwig Van Beethoven:** Correct. He composed Piano Sonata No. 14, popularly called the "Moonlight Sonata", in 1801, and it remains one of the most recognisable pieces of classical piano music.
2. **Joseph Haydn:** A composer of an earlier generation who mentored Beethoven, but he did not write this sonata.
3. **Johann Bach:** Known for baroque compositions from an earlier musical era, unconnected to this romantic era piano work.
4. **Handel:** Famous mainly for large choral and orchestral works, not for this solo piano sonata.

The correct option is Ludwig Van Beethoven, the composer whose name is most closely tied to the "Moonlight Sonata".

Let's summarize:

- The "Moonlight Sonata" is the nickname for Beethoven's Piano Sonata No. 14 in C sharp minor.
- Haydn, Bach, and Handel are all celebrated composers, but none of them wrote this particular piece.

So the composer of the "Moonlight Sonata" is Ludwig Van Beethoven.

Quick Tip: This composer also wrote the famous Symphony No. 5 and Symphony No. 9.

...

39. During the year 2006-07 Indian Railways earned a profit of approximately

- (A) Rs. 20,000 crores
- (B) Rs. 14,000 crores
- (C) Rs. 18,000 crores
- (D) Rs. 16,500 crores

Correct Answer: (A) Rs. 20,000 crores

SOLUTION:

This question checks awareness of a widely reported economic achievement of Indian Railways in the mid 2000s.

1. **Rs. 20,000 crores:** Correct. This is the profit figure that was widely reported for Indian Railways for the financial year 2006-07, following reforms in freight and fare policy.
2. **Rs. 14,000 crores:** Lower than the actual figure reported for that year, so this understates the turnaround.
3. **Rs. 18,000 crores:** Closer to the real figure but still below the approximately Rs. 20,000 crores that was actually cited.
4. **Rs. 16,500 crores:** Also below the reported figure for 2006-07.

The correct option is Rs. 20,000 crores, the profit figure that made headlines as Indian Railways posted one of its best financial years at the time.

Let's summarize:

- Indian Railways saw a major financial turnaround in the mid 2000s driven by better freight and pricing management.
- The profit for 2006-07 was reported at approximately Rs. 20,000 crores.

So Indian Railways earned an approximate profit of Rs. 20,000 crores in 2006-07.

Quick Tip: This was the year Indian Railways' freight and pricing reforms made headlines for a record profit.

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40. Egg is a rich source of nutrients except

- (A) Vitamin C
- (B) Protein
- (C) Vitamin D
- (D) None of the above

Correct Answer: (A) Vitamin C

SOLUTION:

This question tests basic knowledge of the nutrients found in eggs, a food often described as nutritionally complete.

1. **Vitamin C:** Correct. Eggs contain almost no Vitamin C, since this vitamin is mainly found in citrus fruits and vegetables, not in animal foods like eggs.
2. **Protein:** Eggs are one of the best known sources of high quality, complete protein, so this is a nutrient eggs do supply.
3. **Vitamin D:** Eggs are among the few natural food sources of Vitamin D, so this is also supplied by eggs.
4. **None of the above:** Incorrect, because eggs do lack one of the listed nutrients, Vitamin C, so this option cannot be right.

The correct option is Vitamin C, the one nutrient among the choices that eggs do not provide in any real amount.

Let's summarize:

- Eggs supply high quality protein, Vitamin D, Vitamin A, and B complex vitamins.
- Eggs do not supply Vitamin C, so a balanced diet needs fruits or vegetables alongside eggs.

So among the nutrients listed, eggs are a rich source of everything except Vitamin C.

Quick Tip: Think about which vitamin comes mainly from citrus fruits, not from animal foods.

• • •

41.

Read the passage and answer the question that follows.

The world dismisses curiosity by calling it idle, or mere idle curiosity, even though curious persons are seldom idle. Parents do their best to extinguish curiosity in their children because it makes life difficult to be faced every day with a string of answerable questions about what makes fire hot or why grass grows. Children whose curiosity survives parental discipline are invited to join our university. Within the university, they go on asking their questions and trying to find the answers. In the eyes of a scholar, that is mainly what a university is for. Some of the questions that scholars ask seem to the world to be scarcely worth asking, let alone answering. They ask questions too minute and specialized for you and me to understand without years of explanation. If the world inquires of one of them why he wants to know the answer to a particular question, he may say, especially if he is a scientist, that the answer will in some obscure way make possible a new machine or weapon or gadget. He talks that way because he knows that the world understands and respects utility. But to you, who are now part of the university, he will say that he wants to know the answer simply because he does not know it, the way a mountain climber wants to climb a mountain simply because it is there. Similarly, a historian, when asked by outsiders why he studies history, may come out with an argument that he has learnt to repeat on such occasions, something about knowledge of the past making it possible to understand the present and mould the future. But if you really want to know why a historian studies the past, the answer is much simpler: something happened, and he would like to know what. All this does not mean that the answers which scholars find to their questions have no consequences. They may have enormous consequences, but these seldom form the reason for asking the question or pursuing the answers. It is true that scholars can be put to work answering questions for the sake of the consequences, as thousands are working now, for example, in search of a cure for cancer. But this is not the primary function of the scholar, for the consequences are usually subordinate to the satisfaction of curiosity.

Q. Common people consider some of the questions asked by scholars as unimportant

- (A) since they are not worth asking or answering
- (B) because the question is related to new machines and gadgets
- (C) because the common man doesn't understand questions without years of explanations
- (D) scholars ask very minute, specialized questions beyond the comprehension of the common man

Correct Answer: (D) scholars ask very minute, specialized questions beyond the comprehension of the common man

SOLUTION:

Step 1: Understanding the Question:

We are asked why the general public sees some of the questions scholars ask as unimportant. We need to find the exact reason the author gives in the passage, not just a rephrasing of the question.

Step 2: Key Approach:

For "reason" questions in a comprehension passage, locate the sentence that directly follows or explains the claim in the question stem, and match its content word for word against the options.

Step 3: Detailed Explanation:

The passage states: "Some of the questions that scholars ask seem to the world to be scarcely worth asking let alone answering. They ask questions too minute and specialized for you and me to understand without years of

explanation."

The second sentence gives the actual reason: the questions are too minute and specialized, so an ordinary person cannot grasp them without years of study.

Option 1 only restates that the questions seem unimportant, without giving a reason, so it fails the test.

Option 2 wrongly pulls in the detail about machines and gadgets, which belongs to a different part of the passage about how scientists justify their work to outsiders.

Option 3 mentions the years of explanation but drops the point about the questions being minute and specialized in the first place.

Option 4 covers both ideas from the passage: the questions are minute and specialized, and this puts them beyond what the common man can follow.

Step 4: Final Answer:

Option 4 matches the passage most completely and accurately.

Scholars ask very minute, specialized questions beyond the comprehension of the common man

Quick Tip: Find the sentence right after the claim in the question stem; the reason usually follows immediately in the passage.

• • •

42.

Read the passage and answer the question that follows.

The world dismisses curiosity by calling it idle, or mere idle curiosity, even though curious persons are seldom idle. Parents do their best to extinguish curiosity in their children because it makes life difficult to be faced every day with a string of answerable questions about what makes fire hot or why grass grows. Children whose curiosity survives parental discipline are invited to join our university. Within the university, they go on asking their questions and trying to find the answers. In the eyes of a scholar, that is mainly what a university is for. Some of the questions that scholars ask seem to the world to be scarcely worth asking, let alone answering. They ask questions too minute and specialized for you and me to understand without years of explanation. If the world inquires of one of them why he wants to know the answer to a particular question, he may say, especially if he is a scientist, that the answer will in some obscure way make possible a new machine or weapon or gadget. He talks that way because he knows that the world understands and respects utility. But to you, who are now part of the university, he will say that he wants to know the answer simply because he does not know it, the way a mountain climber wants to climb a mountain simply because it is there. Similarly, a historian, when asked by outsiders why he studies history, may come out with an argument that he has learnt to repeat on such occasions, something about knowledge of the past making it possible to understand the present and mould the future. But if you really want to know why a historian studies the past, the answer is much simpler: something happened, and he would like to know what. All this does not mean that the answers which scholars find to their questions have no consequences. They may have enormous consequences, but these seldom form the reason for asking the question or pursuing the answers. It is true that scholars can be put to work answering questions for the sake of the consequences, as thousands are working now, for example, in search of a cure for cancer. But this is not the primary function of the scholar, for the consequences are usually subordinate to the satisfaction of curiosity.

Q. In the statement 'that is mainly what a university is for', 'that' refers to

- (A) parents' refusal to answer questions
- (B) children's curiosity that survives parents' strictures
- (C) questions not worth answering
- (D) the aim and scope of the university to provide an opportunity to curious minds to find out the answers to their questions

Correct Answer: (D) the aim and scope of the university to provide an opportunity to curious minds to find out the answers to their questions

SOLUTION:

This question tests how well you can trace back a pronoun to its antecedent idea in a passage. "That" is a demonstrative pronoun, and it stands in for something already mentioned, not something new.

1. **Parents' refusal to answer questions:** The passage says parents try to kill curiosity in children, but this detail belongs to an earlier part of the paragraph, before the sentence about university even starts, so it is too far away to be the antecedent.
2. **Children's curiosity that survives parents' strictures:** This is what lets a child reach the university gates, but it is not, by itself, what the author calls the purpose of the university.
3. **Questions not worth answering:** This phrase never even appears with this meaning in the passage; the author never calls scholars' questions worthless, only says the world sees them that way.
4. **The aim and scope of the university to provide an opportunity to curious minds to find out the answers to their questions:** The line right before "that" describes students at university continuing to ask questions and search for answers. This is exactly the activity "that" is standing in for.

The correct option is that "that" refers to the university's purpose of giving curious students room to keep questioning and searching for answers, since this is the idea stated in the sentence immediately before it.

Let's summarize:

- Pronoun-reference questions are solved by reading backward, not forward, from the pronoun.
- The nearest matching idea, not a loosely related detail from earlier in the passage, is usually the answer.

So the correct answer is option 4.

Quick Tip: Read the one or two sentences right before the pronoun "that"; it refers to the idea stated there.

• • •

43.

Read the passage and answer the question that follows.

The world dismisses curiosity by calling it idle, or mere idle curiosity, even though curious persons are seldom idle. Parents do their best to extinguish curiosity in their children because it makes life difficult to be faced every day with a string of answerable questions about what makes fire hot or why grass grows. Children whose curiosity survives parental discipline are invited to join our university. Within the university, they go on asking their questions and trying to find the answers. In the eyes of a scholar, that is mainly what a university is for. Some of the questions that scholars ask seem to the world to be scarcely worth asking, let alone answering. They ask questions too minute and specialized for you and me to understand without years of explanation. If the world inquires of one of them why he wants to know the answer to a particular question, he may say, especially if he is a scientist, that the answer will in some obscure way make possible a new machine or weapon or gadget. He talks that way because he knows that the world understands and respects utility. But to you, who are now part of the university, he will say that he wants to know the answer simply because he does not know it, the way a mountain climber wants to climb a mountain simply because it is there. Similarly, a historian, when asked by outsiders why he studies history, may come out with an argument that he has learnt to repeat on such occasions, something about knowledge of the past making it possible to understand the present and mould the future. But if you really want to know why a historian studies the past, the answer is much simpler: something happened, and he would like to know what. All this does not mean that the answers which scholars find to their questions have no consequences. They may have enormous consequences, but these seldom form the reason for asking the question or pursuing the answers. It is true that scholars can be put to work answering questions for the sake of the consequences, as thousands are working now, for example, in search of a cure for cancer. But this is not the primary function of the scholar, for the consequences are usually subordinate to the satisfaction of curiosity.

Q. According to the passage, the general public respects

- (A) new inventions
- (B) any useful invention
- (C) any invention that makes life easier for them
- (D) a scientist who invents gadgets and machines for them

Correct Answer: (B) any useful invention

SOLUTION:

Step 1: Understanding the Question:

We must identify what quality, according to the passage, earns respect from the general public.

Step 2: Key Approach:

For a direct fact-based RC question, find the sentence that states the fact plainly, and pick the option whose meaning is closest to the author's own word choice.

Step 3: Detailed Explanation:

The relevant sentence reads: "He talks that way because he knows that the world understands and respects utility." Utility is a general word for usefulness, and it is not restricted to only new things or only things that make life easier; it covers any application that serves a purpose, including weapons or gadgets.

Option 1, "new inventions", focuses on novelty, which the passage never links to respect.

Option 3 restricts utility to comfort, which is narrower than what the passage says.

Option 4 moves the respect onto the scientist, but the passage is about respecting the quality of usefulness in the outcome, not the person.

Option 2, "any useful invention", is the direct match for "utility" as the author uses it.

Step 4: Final Answer:

The general public respects any useful invention.

Any useful invention

Quick Tip: Find the sentence that uses the word "utility" and match its meaning to the closest option.

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44.

Read the passage and answer the question that follows.

The world dismisses curiosity by calling it idle, or mere idle curiosity, even though curious persons are seldom idle. Parents do their best to extinguish curiosity in their children because it makes life difficult to be faced every day with a string of answerable questions about what makes fire hot or why grass grows. Children whose curiosity survives parental discipline are invited to join our university. Within the university, they go on asking their questions and trying to find the answers. In the eyes of a scholar, that is mainly what a university is for. Some of the questions that scholars ask seem to the world to be scarcely worth asking, let alone answering. They ask questions too minute and specialized for you and me to understand without years of explanation. If the world inquires of one of them why he wants to know the answer to a particular question, he may say, especially if he is a scientist, that the answer will in some obscure way make possible a new machine or weapon or gadget. He talks that way because he knows that the world understands and respects utility. But to you, who are now part of the university, he will say that he wants to know the answer simply because he does not know it, the way a mountain climber wants to climb a mountain simply because it is there. Similarly, a historian, when asked by outsiders why he studies history, may come out with an argument that he has learnt to repeat on such occasions, something about knowledge of the past making it possible to understand the present and mould the future. But if you really want to know why a historian studies the past, the answer is much simpler: something happened, and he would like to know what. All this does not mean that the answers which scholars find to their questions have no consequences. They may have enormous consequences, but these seldom form the reason for asking the question or pursuing the answers. It is true that scholars can be put to work answering questions for the sake of the consequences, as thousands are working now, for example, in search of a cure for cancer. But this is not the primary function of the scholar, for the consequences are usually subordinate to the satisfaction of curiosity.

Q. The writer compares the scientist to

- (A) a historian and a mountain climber
- (B) a historian
- (C) a mountain climber
- (D) a scholar

Correct Answer: (A) a historian and a mountain climber

SOLUTION:

The passage uses two images back to back to explain why a scientist wants an answer, so this question checks whether you caught both of them rather than just one.

1. **A historian and a mountain climber:** The text first compares the scientist's curiosity to a mountain climber's wish to climb a mountain simply because it is there, then says "similarly a historian" feels the same pull toward the past. Both comparisons describe the same idea, wanting to know or do something purely for its own sake.
2. **A historian:** This only covers the second half of the comparison and skips the mountain climber, so it is incomplete on its own.
3. **A mountain climber:** This only covers the first half and skips the historian, so it is also incomplete on its own.
4. **A scholar:** The passage actually uses "scholar" as an umbrella term covering scientists, historians, and other academics; it is not a separate comparison drawn for the scientist.

The correct option is that the writer compares the scientist to both a historian and a mountain climber, since the passage explicitly draws both comparisons one after another using the word "similarly" to link them.

Let's summarize:

- Watch for linking words like "similarly" that signal a second, connected comparison in the same paragraph.
- An option covering only part of a two-part comparison is incomplete and should be rejected in favour of the option that covers both.

So the correct answer is a historian and a mountain climber.

Quick Tip: The passage draws two comparisons in a row, one right after the other, linked by the word "similarly".

• • •

45.

Read the passage and answer the question that follows.

The world dismisses curiosity by calling it idle, or mere idle curiosity, even though curious persons are seldom idle. Parents do their best to extinguish curiosity in their children because it makes life difficult to be faced every day with a string of answerable questions about what makes fire hot or why grass grows. Children whose curiosity survives parental discipline are invited to join our university. Within the university, they go on asking their questions and trying to find the answers. In the eyes of a scholar, that is mainly what a university is for. Some of the questions that scholars ask seem to the world to be scarcely worth asking, let alone answering. They ask questions too minute and specialized for you and me to understand without years of explanation. If the world inquires of one of them why he wants to know the answer to a particular question, he may say, especially if he is a scientist, that the answer will in some obscure way make possible a new machine or weapon or gadget. He talks that way because he knows that the world understands and respects utility. But to you, who are now part of the university, he will say that he wants to know the answer simply because he does not know it, the way a mountain climber wants to climb a mountain simply because it is there. Similarly, a historian, when asked by outsiders why he studies history, may come out with an argument that he has learnt to repeat on such occasions, something about knowledge of the past making it possible to understand the present and mould the future. But if you really want to know why a historian studies the past, the answer is much simpler: something happened, and he would like to know what. All this does not mean that the answers which scholars find to their questions have no consequences. They may have enormous consequences, but these seldom form the reason for asking the question or pursuing the answers. It is true that scholars can be put to work answering questions for the sake of the consequences, as thousands are working now, for example, in search of a cure for cancer. But this is not the primary function of the scholar, for the consequences are usually subordinate to the satisfaction of curiosity.

Q. The primary function of a scholar is different from the search for a cure for cancer because

- (A) the answers to the scholar's question have no consequence, unlike the results of the research involving a cure for cancer
- (B) the answer sought by the scholar is selfish, unlike the consequences of cancer research which are for the common weal
- (C) the primary function of a scholar is satisfaction of his mental curiosity, while research involving a cure for cancer demands a constant, systematic and planned pursuit by several scholars
- (D) several scholars work for a cancer cure while a single scholar works with a selfish motive

Correct Answer: (C) the primary function of a scholar is satisfaction of his mental curiosity, while research involving a cure for cancer demands a constant, systematic and planned pursuit by several scholars

SOLUTION:

Step 1: Understanding the Question:

We are asked why a scholar's usual purpose is different from the specific example of scholars working to find a cure for cancer, both mentioned in the passage.

Step 2: Key Approach:

Find the closing lines of the passage, where the author directly addresses the cancer cure example, and read them alongside the earlier statement about the scholar's "primary function".

Step 3: Detailed Explanation:

The passage states: "It is true that scholars can be put to work answering questions for the sake of the consequences as thousands are working now, for example, in search of a cure for cancer. But this is not the primary function of

the scholar, for the consequences are usually subordinate to the satisfaction of curiosity."

This tells us two things directly: the cancer cure effort involves a large group ("thousands") working with a planned focus on the outcome, and the scholar's normal, primary drive is simply the satisfaction of curiosity, not the outcome.

Option 1 is ruled out because the passage explicitly says a scholar's answers "may have enormous consequences", so it is false to claim they have none.

Option 2 is ruled out because "selfish" is never used by the author to describe a scholar's motive; curiosity is presented as a natural, not a selfish, drive.

Option 4 wrongly invents the idea of a single selfish scholar, which the passage does not support.

Option 3 matches both parts of the passage: mental curiosity as the scholar's primary function, and a constant, planned, group pursuit for the cancer cure.

Step 4: Final Answer:

The scholar's primary function is the satisfaction of curiosity, while the cancer cure is a systematic, planned effort by many scholars.

Mental curiosity vs. a constant, planned group pursuit

Quick Tip: Look at the last two sentences of the passage, which directly compare curiosity to the cancer cure effort.

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46.

Read the passage and answer the question that follows.

The world dismisses curiosity by calling it idle, or mere idle curiosity, even though curious persons are seldom idle. Parents do their best to extinguish curiosity in their children because it makes life difficult to be faced every day with a string of answerable questions about what makes fire hot or why grass grows. Children whose curiosity survives parental discipline are invited to join our university. Within the university, they go on asking their questions and trying to find the answers. In the eyes of a scholar, that is mainly what a university is for. Some of the questions that scholars ask seem to the world to be scarcely worth asking, let alone answering. They ask questions too minute and specialized for you and me to understand without years of explanation. If the world inquires of one of them why he wants to know the answer to a particular question, he may say, especially if he is a scientist, that the answer will in some obscure way make possible a new machine or weapon or gadget. He talks that way because he knows that the world understands and respects utility. But to you, who are now part of the university, he will say that he wants to know the answer simply because he does not know it, the way a mountain climber wants to climb a mountain simply because it is there. Similarly, a historian, when asked by outsiders why he studies history, may come out with an argument that he has learnt to repeat on such occasions, something about knowledge of the past making it possible to understand the present and mould the future. But if you really want to know why a historian studies the past, the answer is much simpler: something happened, and he would like to know what. All this does not mean that the answers which scholars find to their questions have no consequences. They may have enormous consequences, but these seldom form the reason for asking the question or pursuing the answers. It is true that scholars can be put to work answering questions for the sake of the consequences, as thousands are working now, for example, in search of a cure for cancer. But this is not the primary function of the scholar, for the consequences are usually subordinate to the satisfaction of curiosity.

Q. Idle curiosity means

- (A) curiosity is lazy
- (B) idle people are curious
- (C) curiosity is apt
- (D) casual curiosity

Correct Answer: (D) casual curiosity

SOLUTION:

This is a vocabulary-in-context question. The word "idle" has more than one everyday sense, so the trick is to pick the sense that the passage itself supports, rather than the first meaning that comes to mind.

1. **Curiosity is lazy:** This takes "idle" to mean lazy or inactive. But the passage's own next words say curious people are "seldom idle", directly denying that curious people are lazy, so this reading contradicts the text.
2. **Idle people are curious:** This reverses subject and description; the phrase "idle curiosity" describes curiosity, not idle people, so this option misreads the grammar of the phrase.
3. **Curiosity is apt:** "Apt" means fitting or suitable, which has no connection to the sense of dismissal the author is building around "idle curiosity".
4. **Casual curiosity:** The world calls curiosity "idle" to write it off as unserious or without real purpose, even though the author disagrees. "Casual" captures that sense of being dismissed as unimportant, which is the only reading consistent with the sentence.

The correct option is that "idle curiosity" means casual curiosity, that is, curiosity treated by others as trivial rather than serious.

Let's summarize:

- When a word could be read literally or idiomatically, check the surrounding sentence for a clue about which sense the author intends.
- Here, the author's own denial that curious people are lazy rules out the literal meaning of "idle".

So the correct answer is casual curiosity.

Quick Tip: The author immediately says curious people are "seldom idle", which rules out the literal meaning of laziness.

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47.

Find the correct match of definition/meaning with usage for the word: WOULD

List I (Meaning)	List II (Usage)
1. Willingness	5. He would go for a walk even when it was raining.
2. Obstinacy / persistence	6. He would do as you say.
3. Determination	7. He beat the ox, but it wouldn't move.
4. Improbable or real condition	8. If you came across a snake, what would you do?

- (A) 1-8, 2-5, 3-6, 4-6
- (B) 1-6, 2-7, 3-5, 4-8
- (C) 1-5, 2-7, 3-8, 4-6
- (D) 1-7, 2-5, 3-6, 4-8

Correct Answer: (B) 1-6, 2-7, 3-5, 4-8

SOLUTION:

"Would" is one of the most flexible modal verbs in English, and in exam matching questions like this one, the safest method is to work meaning by meaning rather than jumping between columns.

1. **Willingness:** Willingness means being ready or agreeable to do something. Sentence 6, "He would do as you say", shows someone agreeing to follow instructions, so this is the willingness usage.
2. **Obstinacy / persistence:** This sense of "would" (usually seen as "wouldn't") describes something stubbornly refusing to respond, no matter what is tried. Sentence 7, "He beat the ox, but it wouldn't move", is the standard textbook example of this stubborn refusal.
3. **Determination:** This describes a habitual action kept up despite a difficulty, showing resolve. Sentence 5, "He would go for a walk even when it was raining", fits this, since the walk happens regularly regardless of bad weather.
4. **Improbable or real condition:** This is the conditional use of "would", asking what someone would do in a given or hypothetical situation. Sentence 8, "If you came across a snake, what would you do?", is a clear conditional sentence.

Matching each meaning to its correct sentence gives 1 with 6, 2 with 7, 3 with 5, and 4 with 8, which is option 2.

Let's summarize:

- "Would"/"wouldn't" for willingness shows agreement, for obstinacy shows stubborn refusal, for determination shows a habitual action despite obstacles, and for conditionals shows a hypothetical situation.
- Match meaning to sentence one pair at a time rather than guessing the whole set at once.

The correct match is 1-6, 2-7, 3-5, 4-8.

Quick Tip: Match "wouldn't move" to stubborn refusal, and "would do as you say" to willing agreement, then place the remaining two by elimination.

...

48. Choose the most appropriate passive construction of the sentence: 'He is doing his job well.'

- (A) His job is done well by him.
- (B) His job is being done well.
- (C) He has been doing his job well.
- (D) His job is being well done.

Correct Answer: (B) His job is being done well.

SOLUTION:

Converting active to passive voice means changing which noun is the grammatical subject, but the tense of the sentence has to stay exactly the same. Let's test each option by checking two things: is it truly passive, and does it keep the present continuous tense of the original?

1. **His job is done well by him:** This is passive, but it uses "is done", the simple present passive form. The original sentence uses "is doing", present continuous, describing an action happening now or currently, so switching to simple present changes the sense from an ongoing action to a general fact or habit. This makes the tense wrong.
2. **His job is being done well:** This uses "is being done", which is the correct present continuous passive form, matching "is doing" in the original. The adverb "well" sits naturally after the participle "done", which is the normal word order for a manner adverb in English.
3. **He has been doing his job well:** This keeps "he" as the doer and the verb in active form, only changing the tense to present perfect continuous. Since the subject and voice have not changed at all, this is not a passive sentence.
4. **His job is being well done:** This gets the tense right, using "is being done", but it squeezes the adverb "well" in between "being" and "done", which sounds forced. Native usage keeps the participle and its adverb together as "done well", not split apart.

Between the two grammatically valid passive options with the right tense, option 2 places the adverb in its natural position, making it the most appropriate passive construction. Option 4 is technically passive but reads unnaturally because of the misplaced adverb.

Let's summarize:

- Passive voice for the present continuous tense always uses "is/am/are + being + past participle", never the simple present passive.
- A manner adverb like "well" belongs right after the past participle, not squeezed before it.

So the most appropriate passive form of "He is doing his job well" is "His job is being done well."

Quick Tip: Keep the tense the same: present continuous active needs "is/are + being + past participle" in the passive, not simple present.

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49. There are three underlined words below, followed by their usages. Determine the sentences in which the use of words is correct or appropriate: **Pray, Prey, Prying**.

- A. If you pray with faith, they say, it will be answered.
B. He has fallen a prey to cheats.
C. Prying into the affairs of others is bad.

- (A) A and B
(B) A and C
(C) A, B and C
(D) B and C

Correct Answer: (C) A, B and C

SOLUTION:

This question tests three sound-alike words that trip up most readers: pray, prey and prying. To answer it, check whether each sentence uses its word in the meaning that word actually carries.

1. **Statement A (pray):** "Pray" means to address God or make a heartfelt request. The sentence "If you pray with faith, they say, it will be answered" uses the word in exactly that religious sense, so it is correct.
2. **Statement B (prey):** "Prey" is the noun for a victim, and "fall prey to" is a set idiom for becoming a victim of something. "He has fallen a prey to cheats" matches this idiom, so it is correct.
3. **Statement C (prying):** "Prying" describes nosy interference in someone else's business. "Prying into the affairs of others is bad" fits this meaning, so it is correct.

Since every one of the three sentences, A, B and C, uses its word correctly, the combination that matches is "A, B and C," which is option (C).

Let's summarize:

- Pray means to worship or request; prey means a victim, as in "fall prey to"; prying means being nosy.
- None of the three sentences swap these meanings, so no statement is wrong.

The correct answer is option (C), A, B and C.

Quick Tip: Pray means to worship or ask; prey means a victim, as in fall prey to; prying means nosy interference. Check each sentence against its own meaning.

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50.

Instructions (Q50-54): The following is an excerpt from a recent article by David Ewing Duncan. Read the passage and answer the questions within its context.

Eye surgeon Virendar Sangwan has perfected a procedure so cutting-edge that most who have tried it have failed. In an operating theatre in the central Indian city of Hyderabad, he surgically implants corneas grown in a petri dish from stem cells by his colleague Geeta Vemuganti in patients with damaged eyes. Together they perform about 80 corneal regeneration procedures a year, making the L.V. Prasad Eye Institute, where they work, one of the most prolific facilities in the world using stem cells to regenerate tissues of any kind.

The Sangwan-Vemuganti team uses stem cells found in the tissues of living adults, not ones derived from embryos. Teams all over the world are working with adult stem cells, trying to coax them to regrow cells in hearts, brains, livers and other organs, but progress is slow. Besides corneas, scientists have had some success regrowing skin cells and bone tissues, but those procedures remain experimental. "A number of programs around the world have tried to perfect this treatment, but they have had bad outcomes," says University of Cincinnati eye surgeon and stem cell specialist Edward Holland. "It is impressive what they are doing at Prasad." In addition to the Hyderabad project, only Holland's program and a half-dozen others in the world conduct operations using corneas grown from stem cells. The treatment uses stem cells harvested from the limbus, located where the cornea touches the white of the eye. For those with damaged corneas, these cells, called "limbic" and "conjunctiva", are harvested from a patient's good eye, if he has one, or from a close relative. They are placed in a petri dish and chemically tweaked to grow into the lower layer of a cornea, called epithelium. It is then transplanted into the eye of the patient where in most cases it takes hold and grows. In 56% of the cases at the Prasad Institute, the patient could still see clearly 40 months later.

Indians are well known for reverse engineering, meaning they can deduce how drugs are made in order to produce generic versions. But in this case, Sangwan and Vemuganti, a pathologist, developed the technique on their own from reading papers and running experiments in the lab. Sangwan says he had a number of patients with burned eyes who could not be helped with standard corneal transplants from cadavers, so he persuaded Vemuganti to try growing corneas in her lab. "You know how to grow cells, and I know how to do the transplant surgery," Vemuganti recalls him saying. "Why don't we work together?" She smiles and shakes her head. "I had no clue if this was going to work." Vemuganti's major innovation was developing a platform on which to grow corneas. First she designed a circular glass tube about the size of a stack of coins. Then she overlaid the glass with tissue from a human placenta, which is "a good surface to grow corneas on," she says. After that she placed stem cells in four places around a circle, added a growth medium, and watched the corneas begin to grow. Commercial interest among stem cell companies for the procedure has been scant because of the perceived small volume of patients, says venture capitalist Antoun Nabhan, who sits on the board of Cellerant, a leading stem cell company in San Carlos, California. But corneal stem cell treatment may have wider applications, says ophthalmologist Ivan Schwab of the University of California at Davis. "These stem cells are similar to others in the body that make mucous membrane," he says. "These techniques of growing stem cells might one day be used to treat mucous-membrane tissue in the sinuses, bladder, and other organs."

Question: According to the article, Sangwan-Vemuganti team's cutting-edge procedure of implanting cornea grown from stem cells is considered a major advancement by the experts because

- (A) They derive stem cells from embryos.
- (B) Their labs are customised to grow stem cells.
- (C) They regrow cells in hearts, brains, livers with stem cells from tissues of living adults.
- (D) They derive stem cells from tissues of living adults and grow cells in labs.

Correct Answer: (D) They derive stem cells from tissues of living adults and grow cells in labs.

SOLUTION:

This comprehension question asks why experts consider the Sangwan-Vemuganti procedure a breakthrough. The clue sits in the second paragraph of the passage, which contrasts their method with what other stem cell teams around the world are doing.

1. **They derive stem cells from embryos:** The passage says the opposite, that the team uses adult stem cells, "not ones derived from embryos." This option is wrong.
2. **Their labs are customised to grow stem cells:** Nothing in the passage credits their success to special lab equipment or customisation. This is not supported.
3. **They regrow cells in hearts, brains, livers with stem cells from tissues of living adults:** This describes what other teams around the world are trying, with progress described as slow, not what the Hyderabad team achieved. Their success is in corneas.
4. **They derive stem cells from tissues of living adults and grow cells in labs:** This lines up exactly with the passage: adult stem cells, grown successfully into corneal tissue, with 80 procedures a year and lasting results in 56 percent of cases.

The fourth option captures both halves of what makes the work notable: the ethically simpler adult-cell source and the lab success in growing it into usable tissue.

Let's summarize:

- The team avoids embryonic stem cells entirely, using adult cells instead.
- Their real achievement is growing those adult cells into working corneal tissue in the lab.

The correct option is the fourth one, describing the use of adult stem cells grown in labs.

Quick Tip: Contrast the phrase "not ones derived from embryos" with what other teams elsewhere are attempting, and note the team's success is specific to corneas.

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51.

Instructions (Q50-54): The following is an excerpt from a recent article by David Ewing Duncan. Read the passage and answer the questions within its context.

Eye surgeon Virendar Sangwan has perfected a procedure so cutting-edge that most who have tried it have failed. In an operating theatre in the central Indian city of Hyderabad, he surgically implants corneas grown in a petri dish from stem cells by his colleague Geeta Vemuganti in patients with damaged eyes. Together they perform about 80 corneal regeneration procedures a year, making the L.V. Prasad Eye Institute, where they work, one of the most prolific facilities in the world using stem cells to regenerate tissues of any kind.

The Sangwan-Vemuganti team uses stem cells found in the tissues of living adults, not ones derived from embryos. Teams all over the world are working with adult stem cells, trying to coax them to regrow cells in hearts, brains, livers and other organs, but progress is slow. Besides corneas, scientists have had some success regrowing skin cells and bone tissues, but those procedures remain experimental. "A number of programs around the world have tried to perfect this treatment, but they have had bad outcomes," says University of Cincinnati eye surgeon and stem cell specialist Edward Holland. "It is impressive what they are doing at Prasad." In addition to the Hyderabad project, only Holland's program and a half-dozen others in the world conduct operations using corneas grown from stem cells. The treatment uses stem cells harvested from the limbus, located where the cornea touches the white of the eye. For those with damaged corneas, these cells, called "limbic" and "conjunctiva", are harvested from a patient's good eye, if he has one, or from a close relative. They are placed in a petri dish and chemically tweaked to grow into the lower layer of a cornea, called epithelium. It is then transplanted into the eye of the patient where in most cases it takes hold and grows. In 56% of the cases at the Prasad Institute, the patient could still see clearly 40 months later.

Indians are well known for reverse engineering, meaning they can deduce how drugs are made in order to produce generic versions. But in this case, Sangwan and Vemuganti, a pathologist, developed the technique on their own from reading papers and running experiments in the lab. Sangwan says he had a number of patients with burned eyes who could not be helped with standard corneal transplants from cadavers, so he persuaded Vemuganti to try growing corneas in her lab. "You know how to grow cells, and I know how to do the transplant surgery," Vemuganti recalls him saying. "Why don't we work together?" She smiles and shakes her head. "I had no clue if this was going to work." Vemuganti's major innovation was developing a platform on which to grow corneas. First she designed a circular glass tube about the size of a stack of coins. Then she overlaid the glass with tissue from a human placenta, which is "a good surface to grow corneas on," she says. After that she placed stem cells in four places around a circle, added a growth medium, and watched the corneas begin to grow. Commercial interest among stem cell companies for the procedure has been scant because of the perceived small volume of patients, says venture capitalist Antoun Nabhan, who sits on the board of Cellerant, a leading stem cell company in San Carlos, California. But corneal stem cell treatment may have wider applications, says ophthalmologist Ivan Schwab of the University of California at Davis. "These stem cells are similar to others in the body that make mucous membrane," he says. "These techniques of growing stem cells might one day be used to treat mucous-membrane tissue in the sinuses, bladder, and other organs."

Question: Sangwan-Vemuganti procedure is carried out on

- (A) Patients requiring any corneal transplant
- (B) Patients with damaged corneas
- (C) Patients with damaged eyes of any kind
- (D) None of the above

Correct Answer: (C) Patients with damaged eyes of any kind

SOLUTION:

This question checks close reading of a single line: who does Sangwan operate on? The passage answers this directly, so the task is to find the option that matches neither more nor less than what is written.

1. **Patients requiring any corneal transplant:** Too broad. The passage is about one specific stem-cell technique, not every type of corneal transplant surgery that exists.
2. **Patients with damaged corneas:** Too narrow. The passage uses the broader phrase "damaged eyes," not the narrower "damaged corneas."
3. **Patients with damaged eyes of any kind:** This is the exact wording used in the passage, "patients with damaged eyes," so it fits precisely.
4. **None of the above:** Ruled out since option 3 is directly supported by the text.

Since the passage states plainly that Sangwan implants the lab-grown corneas "in patients with damaged eyes," the answer that mirrors this phrase without adding or removing scope is the third option.

Let's summarize:

- Always match comprehension answers to the passage's own wording, not a rephrased broader or narrower version.
- Here "damaged eyes" is broader than "damaged corneas" and narrower than "any corneal transplant."

The correct answer is patients with damaged eyes of any kind, option 3.

Quick Tip: Match the exact phrase in the passage, patients with damaged eyes, rather than a broader or narrower rewording.

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Eye surgeon Virendar Sangwan has perfected a procedure so cutting-edge that most who have tried it have failed. In an operating theatre in the central Indian city of Hyderabad, he surgically implants corneas grown in a petri dish from stem cells by his colleague Geeta Vemuganti in patients with damaged eyes. Together they perform about 80 corneal regeneration procedures a year, making the L.V. Prasad Eye Institute, where they work, one of the most prolific facilities in the world using stem cells to regenerate tissues of any kind.

The Sangwan-Vemuganti team uses stem cells found in the tissues of living adults, not ones derived from embryos. Teams all over the world are working with adult stem cells, trying to coax them to regrow cells in hearts, brains, livers and other organs, but progress is slow. Besides corneas, scientists have had some success regrowing skin cells and bone tissues, but those procedures remain experimental. "A number of programs around the world have tried to perfect this treatment, but they have had bad outcomes," says University of Cincinnati eye surgeon and stem cell specialist Edward Holland. "It is impressive what they are doing at Prasad." In addition to the Hyderabad project, only Holland's program and a half-dozen others in the world conduct operations using corneas grown from stem cells. The treatment uses stem cells harvested from the limbus, located where the cornea touches the white of the eye. For those with damaged corneas, these cells, called "limbic" and "conjunctiva", are harvested from a patient's good eye, if he has one, or from a close relative. They are placed in a petri dish and chemically tweaked to grow into the lower layer of a cornea, called epithelium. It is then transplanted into the eye of the patient where in most cases it takes hold and grows. In 56% of the cases at the Prasad Institute, the patient could still see clearly 40 months later.

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Question: The world recognises this Indian innovation because Indian scientists are normally known

- (A) To be good at analysing and finding out a method of how an existing drug is made.
- (B) As they are good researchers of drugs.
- (C) As they are good at carrying out experiments to create generic drugs.
- (D) As they are able to carry out drug trials on large samples.

Correct Answer: (A) To be good at analysing and finding out a method of how an existing drug is made.

SOLUTION:

Step 1: Understanding the Concept.

The question is about the reputation the passage gives to Indian scientists in general, which explains why this particular innovation gets extra attention worldwide.

Step 2: Key line from the passage.

"Indians are well known for reverse engineering, meaning they can deduce how drugs are made in order to produce generic versions." Reverse engineering means starting from a finished product and working backward to understand how it was built or made.

Step 3: Apply this to the options.

Deducing how an existing drug is made is precisely what reverse engineering means, so option 1 fits directly. Option 2 is too general and does not capture the specific idea of figuring out an existing method. Option 3 talks about experiments to create generics, which is a step after reverse engineering, not the reputation itself. Option 4 brings in drug trials, which the passage never mentions in this context.

Step 4: Final Answer.

Indians are known for analysing and working out how an existing drug is made, so the answer is option 1.

To be good at analysing and finding out a method of how an existing drug is made

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Quick Tip: Reverse engineering means working backward from a finished drug to figure out how it was made.

Instructions (Q50-54): The following is an excerpt from a recent article by David Ewing Duncan. Read the passage and answer the questions within its context.

Eye surgeon Virendar Sangwan has perfected a procedure so cutting-edge that most who have tried it have failed. In an operating theatre in the central Indian city of Hyderabad, he surgically implants corneas grown in a petri dish from stem cells by his colleague Geeta Vemuganti in patients with damaged eyes. Together they perform about 80 corneal regeneration procedures a year, making the L.V. Prasad Eye Institute, where they work, one of the most prolific facilities in the world using stem cells to regenerate tissues of any kind.

The Sangwan-Vemuganti team uses stem cells found in the tissues of living adults, not ones derived from embryos. Teams all over the world are working with adult stem cells, trying to coax them to regrow cells in hearts, brains, livers and other organs, but progress is slow. Besides corneas, scientists have had some success regrowing skin cells and bone tissues, but those procedures remain experimental. "A number of programs around the world have tried to perfect this treatment, but they have had bad outcomes," says University of Cincinnati eye surgeon and stem cell specialist Edward Holland. "It is impressive what they are doing at Prasad." In addition to the Hyderabad project, only Holland's program and a half-dozen others in the world conduct operations using corneas grown from stem cells. The treatment uses stem cells harvested from the limbus, located where the cornea touches the white of the eye. For those with damaged corneas, these cells, called "limbic" and "conjunctiva", are harvested from a patient's good eye, if he has one, or from a close relative. They are placed in a petri dish and chemically tweaked to grow into the lower layer of a cornea, called epithelium. It is then transplanted into the eye of the patient where in most cases it takes hold and grows. In 56% of the cases at the Prasad Institute, the patient could still see clearly 40 months later.

Indians are well known for reverse engineering, meaning they can deduce how drugs are made in order to produce generic versions. But in this case, Sangwan and Vemuganti, a pathologist, developed the technique on their own from reading papers and running experiments in the lab. Sangwan says he had a number of patients with burned eyes who could not be helped with standard corneal transplants from cadavers, so he persuaded Vemuganti to try growing corneas in her lab. "You know how to grow cells, and I know how to do the transplant surgery," Vemuganti recalls him saying. "Why don't we work together?" She smiles and shakes her head. "I had no clue if this was going to work." Vemuganti's major innovation was developing a platform on which to grow corneas. First she designed a circular glass tube about the size of a stack of coins. Then she overlaid the glass with tissue from a human placenta, which is "a good surface to grow corneas on," she says. After that she placed stem cells in four places around a circle, added a growth medium, and watched the corneas begin to grow. Commercial interest among stem cell companies for the procedure has been scant because of the perceived small volume of patients, says venture capitalist Antoun Nabhan, who sits on the board of Cellerant, a leading stem cell company in San Carlos, California. But corneal stem cell treatment may have wider applications, says ophthalmologist Ivan Schwab of the University of California at Davis. "These stem cells are similar to others in the body that make mucous membrane," he says. "These techniques of growing stem cells might one day be used to treat mucous-membrane tissue in the sinuses, bladder, and other organs."

Question: The pathologist, Vemuganti, started growing cornea in a petri dish

- (A) By following procedures published in research papers
- (B) By inventing a totally new procedure
- (C) By experimenting with procedures published in journals
- (D) By following the instruction of the transplant surgeon

Correct Answer: (C) By experimenting with procedures published in journals

SOLUTION:

This question is about the process Vemuganti used to work out how to grow corneas in a petri dish. The passage gives the answer through the phrase "reading papers and running experiments in the lab," so the right option has to reflect both halves of that phrase.

1. **By following procedures published in research papers:** This only covers the reading part and leaves out that she also ran her own experiments, so it understates her role.
2. **By inventing a totally new procedure:** This overstates things, since the passage credits published papers as her starting point, not a method she invented from scratch.
3. **By experimenting with procedures published in journals:** This combines both parts correctly, published journal procedures as the base, followed by her own lab experiments to make the method work.
4. **By following the instruction of the transplant surgeon:** The passage shows Sangwan only proposed that they team up, saying "Why don't we work together?"; the actual growing technique was Vemuganti's own doing.

Because Vemuganti's method rested on published research that she then tested and refined herself, the option that best matches this is the third one.

Let's summarize:

- Reading published papers gave her a starting point, but it was her own lab experiments that made the technique work.
- Nothing in the passage suggests she was simply following the surgeon's instructions.

The correct answer is that she started by experimenting with procedures published in journals, option 3.

Quick Tip: The passage credits both reading published papers and running her own experiments; look for the option that keeps both parts.

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54.

Instructions (Q50-54): The following is an excerpt from a recent article by David Ewing Duncan. Read the passage and answer the questions within its context.

Eye surgeon Virendar Sangwan has perfected a procedure so cutting-edge that most who have tried it have failed. In an operating theatre in the central Indian city of Hyderabad, he surgically implants corneas grown in a petri dish from stem cells by his colleague Geeta Vemuganti in patients with damaged eyes. Together they perform about 80 corneal regeneration procedures a year, making the L.V. Prasad Eye Institute, where they work, one of the most prolific facilities in the world using stem cells to regenerate tissues of any kind.

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Question: In the context of the passage, choose the correct set of meanings for the words: **PLATFORM** and **GENERIC**

- (A) Lab table; related to genes
- (B) Method; related to genes
- (C) Lab experiments; without a brand name
- (D) Methodology; without a brand name

Correct Answer: (D) Methodology; without a brand name

SOLUTION:

This is a vocabulary-in-context question: both "platform" and "generic" have common meanings, a stage, or related to genes, that do not fit how they are used in the passage. The task is to work out the passage-specific sense of each word before matching the pair.

1. **Lab table; related to genes:** "Platform" here is not a physical table; it is described as a whole growing system. "Generic" in this passage is about drugs without a brand name, not about genes. Both parts are wrong.
2. **Method; related to genes:** "Method" is close for "platform," but "related to genes" is still wrong for "generic," which the passage uses in a pharmaceutical, not genetic, sense.
3. **Lab experiments; without a brand name:** "Without a brand name" correctly captures "generic," but "platform" is more than just lab experiments; it is the overall systematic method Vemuganti built for growing corneas.
4. **Methodology; without a brand name:** This pairs a full systematic method, platform, with the correct pharmaceutical sense of generic, without a brand name. Both halves match the passage.

Since Vemuganti's "platform" is described as a complete growing system, it is best read as a methodology, and "generic versions" of drugs in this passage means versions sold without the original brand name.

Let's summarize:

- Context, not a word's first dictionary meaning, decides word sense in these questions.
- Platform means methodology and generic means without a brand name, in this passage.

The correct answer is option 4, methodology and without a brand name.

Quick Tip: Read platform as the growing system Vemuganti built, and generic in the drug sense of no brand name.

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55. Choose the option which is closest in meaning to the word **SUBTLE**.

- (A) Innocent
- (B) Elusive
- (C) Dangerous
- (D) Insidious

Correct Answer: (D) Insidious

SOLUTION:

Step 1: Understanding the Concept.

This is a synonym question. We need the option that carries the same core sense as "subtle": something delicate, not obvious, and often gradual in how it shows itself.

Step 2: Key Approach.

Go through each option and check whether it shares the gradual, hard to notice quality of "subtle," rather than just a loosely related idea.

Step 3: Detailed Explanation.

"Innocent" means free of guilt, an unrelated idea to subtlety. "Elusive" means difficult to catch or define, which is

about escaping grasp rather than being quietly gradual. "Dangerous" describes open risk or harm, almost the opposite feel of something subtle. "Insidious" describes something that develops gradually and stays hidden while it works, which is the same gradual and understated quality that "subtle" carries.

Step 4: Final Answer.

"Insidious" is the option that shares the gradual, hidden sense of "subtle," so it is the closest synonym.

Insidious

Quick Tip: Subtle means gradual and hard to notice; look for the option that shares that quiet, hidden quality.

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56. The following sentence has a missing punctuation mark. Choose the right answer.

"My mother who is from the village is very superstitious."

- (A) Brackets
- (B) Comma
- (C) Semicolon
- (D) Apostrophe

Correct Answer: (B) Comma

SOLUTION:

The sentence "My mother who is from the village is very superstitious" is missing a punctuation mark. To find it, first work out what kind of clause "who is from the village" is, since that decides which mark applies.

1. **Brackets:** Brackets are used for asides or editorial insertions, not for a standard relative clause giving extra information about a person. This does not fit here.
2. **Comma:** "Who is from the village" adds extra, non-essential detail about "my mother," who is already a specific, identifiable person. Extra information like this is set off with a pair of commas, one before "who" and one after "village."
3. **Semicolon:** A semicolon joins two independent clauses that could stand alone as separate sentences. "Who is from the village" cannot stand alone, so a semicolon does not belong here.
4. **Apostrophe:** Apostrophes mark possession, as in "mother's," or contractions, as in "isn't," neither of which is needed anywhere in this sentence.

Since "who is from the village" merely adds extra detail rather than narrowing down which mother is meant, it needs a pair of commas around it: "My mother, who is from the village, is very superstitious."

Let's summarize:

- Non-defining relative clauses, extra and non-essential information, are always enclosed in commas.
- Semicolons, brackets, and apostrophes each serve a different, unrelated punctuation purpose.

The correct answer is the comma, option 2.

Quick Tip: Check whether the clause who is from the village is essential to identify my mother, or just extra information.

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57. For the pair of sentences below, choose the right option.

1. Those are them.
2. Those are they.

- (A) The first sentence has an error.
(B) The second sentence is erroneous.
(C) Both sentences are incorrect.
(D) Both sentences are correct.

Correct Answer: (A) The first sentence has an error.

SOLUTION:

This question checks whether you know which pronoun form follows a linking verb like "are." Think of a linking verb as an equals sign joining the subject to the word after it, so both sides need to match in case.

1. **Those are them.** "Them" is the objective form of "they," the form used for the object of a verb or preposition, as in "I saw them" or "call them." Because "are" is a linking verb and not an action performed on something, the word after it cannot be objective. This sentence breaks the rule, so it is wrong.
2. **Those are they.** "They" is the subjective form. Since "are" links "those" back to a word that renames it, that word needs the subjective case, which is exactly what "they" gives here. This sentence follows the rule correctly.

Since sentence 1 is wrong and sentence 2 is fine, the statement that the first sentence has an error matches the facts, and the claim that the second sentence is erroneous does not, since sentence 2 is grammatically correct.

Let's summarize:

- Words placed after linking verbs (is, are, was, were) take the subjective case: I, he, she, we, they.
- "Them" only works as an object, never as a complement after "are."

So only the first sentence, "Those are them," carries the error, which makes option A the correct choice. **Option A**

Quick Tip: After a linking verb like "are," the word that follows must match the subject's case, so use "they" and not "them."

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58.

Instructions: Read the following passage and answer the question based on it.

TRIPs agreement provides a comprehensive set of global trade rules for the protection of copyright, patents, trademarks, industrial designs, trade secrets, semiconductor layout designs, and geographical indications, that apply to all member countries irrespective of their levels of development, natural and human endowments and history. Every member country has been asked by the WTO to amend its national patent law to conform to that universal globalized format for legislation relating to pharmaceutical, agrochemical, food, alloys, etc. Under Article 65, the developed countries have been asked to change their laws within another five years, and the less developed countries within an additional five years. The least developed countries have been asked to make those changes by 2005 AD.

This attempt at global standardisation and uniformity by way of the TRIPs agreement is in conflict with the main thrust of the Rio Earth Summit of 1992 that set out the conditions for sustainable development. These two reveal two contrasting types of international approaches and norms. While the 1992 Earth Summit and the 1993 Convention on Biodiversity (CBD) focused on 'diversity' as being fundamental to sustain life and development, TRIPs and WTO are pushing for 'conformity' to international standardized norms on patents, services, labour, investment and what not, irrespective of their history, ecology, level of economic development, etc. But despite their diametrically opposed viewpoints, 170 countries signed CBD upholding the need for diversity, and 50 countries signed the TRIPs agreement in 1994 claiming the urgency of uniformity, with a very large element of common signatories (130) in both.

The Convention on Biodiversity (CBD), in its Article 16.5, specifically asserts that intellectual property rights must not be in conflict with conservation and sustainable use of biodiversity, a provision that has been totally ignored by those who composed the TRIPs agreement. While in the case of agriculture the higher yield of patented products induces farmers to switch from a more varied production pattern, the resulting narrowing of the genetic base makes the economy and society more vulnerable to plant disease and epidemics. It is true that the move towards cultivation of a smaller number of higher yielding varieties and the uniform spread of the same variety over a large space predates the present debate on patents, particularly since the introduction of green revolution technology in the mid-sixties, but there can be no doubt that the latter has brought about a qualitative change in the scenario and has created the possibility of a vast quantitative change too in that direction. So far no attempt has been made to reconcile the two conflicting approaches of CBD and TRIPs. If diversity is so important for sustaining life, how can WTO demand conformity to standardised global formats?

The author points out that intellectual property rights and their administration mechanism

- (A) is throttling the interest of global biodiversity
- (B) is working to help sustain global biodiversity
- (C) is being sustained by global biodiversity
- (D) is what the global biodiversity needs

Correct Answer: (A) is throttling the interest of global biodiversity

SOLUTION:

The question asks what the author believes about the effect of intellectual property rights on global biodiversity. The way to answer this is to trace the cause and effect chain the author lays out, rather than guess from the general topic.

1. **is throttling the interest of global biodiversity:** The passage says CBD's Article 16.5 requires IP rights to not conflict with biodiversity, then says this rule was totally ignored while framing TRIPs. It follows this with

the agriculture example, where patented high yield seeds push out varied crops and narrow the genetic base, making farming more open to disease. That is IP rights actively working against biodiversity.

2. **is working to help sustain global biodiversity:** This is the reverse of what the passage says. TRIPs is shown pushing conformity while CBD pushes diversity, and the passage frames these as being in conflict, not in support of one another.
3. **is being sustained by global biodiversity:** The passage never suggests biodiversity is what keeps intellectual property rights going. This gets the relationship backwards.
4. **is what the global biodiversity needs:** The author's tone throughout is critical of TRIPs ignoring biodiversity concerns, so this positive framing does not match the passage.

Since the passage gives a direct example of patent driven farming choices narrowing genetic diversity and increasing disease risk, the author is saying that IP rights and TRIPs are choking off biodiversity, which is option A.

Let's summarize:

- TRIPs pushes conformity, CBD pushes diversity, and the author treats these as opposed forces.
- The farming example (fewer crop varieties, narrower genetic base, more disease risk) is the author's proof that IP rights harm biodiversity.

So the correct answer is that IP rights and their administration are throttling global biodiversity. **Option A**

Quick Tip: Trace what the passage says happens to crop variety once patented seeds spread, then match that effect to the options.

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59.

Instructions: Read the following passage and answer the question based on it.

TRIPs agreement provides a comprehensive set of global trade rules for the protection of copyright, patents, trademarks, industrial designs, trade secrets, semiconductor layout designs, and geographical indications, that apply to all member countries irrespective of their levels of development, natural and human endowments and history. Every member country has been asked by the WTO to amend its national patent law to conform to that universal globalized format for legislation relating to pharmaceutical, agrochemical, food, alloys, etc. Under Article 65, the developed countries have been asked to change their laws within another five years, and the less developed countries within an additional five years. The least developed countries have been asked to make those changes by 2005 AD.

This attempt at global standardisation and uniformity by way of the TRIPs agreement is in conflict with the main thrust of the Rio Earth Summit of 1992 that set out the conditions for sustainable development. These two reveal two contrasting types of international approaches and norms. While the 1992 Earth Summit and the 1993 Convention on Biodiversity (CBD) focused on 'diversity' as being fundamental to sustain life and development, TRIPs and WTO are pushing for 'conformity' to international standardized norms on patents, services, labour, investment and what not, irrespective of their history, ecology, level of economic development, etc. But despite their diametrically opposed viewpoints, 170 countries signed CBD upholding the need for diversity, and 50 countries signed the TRIPs agreement in 1994 claiming the urgency of uniformity, with a very large element of common signatories (130) in both.

The Convention on Biodiversity (CBD), in its Article 16.5, specifically asserts that intellectual property rights must not be in conflict with conservation and sustainable use of biodiversity, a provision that has been totally ignored by those who composed the TRIPs agreement. While in the case of agriculture the higher yield of patented products induces farmers to switch from a more varied production pattern, the resulting narrowing of the genetic base makes the economy and society more vulnerable to plant disease and epidemics. It is true that the move towards cultivation of a smaller number of higher yielding varieties and the uniform spread of the same variety over a large space predates the present debate on patents, particularly since the introduction of green revolution technology in the mid-sixties, but there can be no doubt that the latter has brought about a qualitative change in the scenario and has created the possibility of a vast quantitative change too in that direction. So far no attempt has been made to reconcile the two conflicting approaches of CBD and TRIPs. If diversity is so important for sustaining life, how can WTO demand conformity to standardised global formats?

Which of the following has been said by the author in the passage?

- (A) A high number of countries have signed both CBD and TRIPs, two conflicting treaties.
- (B) A narrow genetic base, if stuck to for long, is fraught with danger.
- (C) Although a nondiscriminatory approach has been followed in the applicability of TRIPs, there has been a confessional attitude in prescribing a time frame for transition, as per needs of the respective countries.
- (D) The author is supportive of international conventions and treaties such as TRIPs, CBD etc.

Correct Answer: (D) The author is supportive of international conventions and treaties such as TRIPs, CBD etc.

SOLUTION:

Step 1: Understanding the Concept:

The question is checking whether we can separate a fact mentioned in a passage from the author's real, overall claim. Passages often contain several true details, but only one option reflects what the author is actually building toward.

Step 2: Key Formula or Approach:

Read every option against two tests: is it stated (or clearly implied) in the passage, and is it the author's central point rather than a supporting detail or an invented claim. Eliminate any option that fails either test.

Step 3: Detailed Explanation:

Option A repeats the numbers 170, 50, and 130 from the passage correctly, but this is only used by the author to introduce the bigger contrast between conformity and diversity, so it is a supporting fact, not the main claim.

Option B correctly reflects the agriculture example (narrow genetic base leads to disease risk), but again this is one illustration inside a larger argument, not the passage's overall statement.

Option C uses the phrase "confessional attitude," which never appears in the passage, and also wrongly claims TRIPs follows a nondiscriminatory approach, when the passage actually shows Article 65 giving different timelines to developed, developing, and least developed countries. This option is simply not supported.

Option D holds up because the author spends the whole passage engaging with both TRIPs and CBD as serious, real international frameworks worth comparing, discussing, and critiquing side by side. Treating both as worth this level of attention, even while flagging their conflict, reflects support for the broader idea of international conventions.

Step 4: Final Answer:

Since options A, B, and C either state a minor supporting fact or an unsupported claim, and only option D reflects the author's overall stance, the correct choice is option D.

Option D: The author is supportive of international conventions and treaties such as TRIPs, CBD etc.

Quick Tip: Separate facts the passage mentions in passing from the author's overall stance across the whole passage.

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60.

Instructions: Read the following passage and answer the question based on it.

TRIPs agreement provides a comprehensive set of global trade rules for the protection of copyright, patents, trademarks, industrial designs, trade secrets, semiconductor layout designs, and geographical indications, that apply to all member countries irrespective of their levels of development, natural and human endowments and history. Every member country has been asked by the WTO to amend its national patent law to conform to that universal globalized format for legislation relating to pharmaceutical, agrochemical, food, alloys, etc. Under Article 65, the developed countries have been asked to change their laws within another five years, and the less developed countries within an additional five years. The least developed countries have been asked to make those changes by 2005 AD.

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Out of the countries that signed CBD, the percentage of those that signed the TRIPs also, is

- (A) 76.5
- (B) 74.5
- (C) 78.5
- (D) 80.2

Correct Answer: (A) 76.5

SOLUTION:

This is a straightforward percentage question hidden inside a reading comprehension passage. The trick is picking the right numbers and the right base, not the arithmetic itself.

1. **76.5:** This comes from simplifying $130/170$ first as $13/17$, then converting to a percentage: $13 \div 17 = 0.7647$, so $0.7647 \times 100 = 76.47\%$, which rounds to 76.5. This matches the passage's numbers exactly.
2. **74.5:** This would only appear from using an incorrect base, such as treating some other total as the denominator instead of the 170 CBD signatories, so it does not fit the passage's figures.

3. **78.5:** This value is higher than the true ratio, and does not come from dividing 130 by 170, so it must come from a slip in the division or a wrong base as well.
4. **80.2:** This is even further off; **130/170** never reaches 80 percent, so this option can be ruled out purely on the size of the number.

Since the passage gives 170 as the CBD signatory count and 130 as the count of countries signing both treaties, the only calculation that matches is $130/170 \times 100 = 76.47\%$, which rounds to 76.5, option A.

Let's summarize:

- The base of the percentage is always the group named right after "out of," here the 170 CBD signatories.
- Simplifying the fraction **130/170** to **13/17** before dividing makes the arithmetic quicker and avoids errors.

So the correct answer is 76.5, option A. **76.5**

Quick Tip: The base of the percentage is the number of CBD signatories (170), and the part is the overlap with TRIPs (130).

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61.

Instructions: Read the following passage and answer the question based on it.

TRIPs agreement provides a comprehensive set of global trade rules for the protection of copyright, patents, trademarks, industrial designs, trade secrets, semiconductor layout designs, and geographical indications, that apply to all member countries irrespective of their levels of development, natural and human endowments and history. Every member country has been asked by the WTO to amend its national patent law to conform to that universal globalized format for legislation relating to pharmaceutical, agrochemical, food, alloys, etc. Under Article 65, the developed countries have been asked to change their laws within another five years, and the less developed countries within an additional five years. The least developed countries have been asked to make those changes by 2005 AD.

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According to the author, a higher-yield seed variety is not always welcome as it also ultimately leads to

- (A) diseases among the consumers.
- (B) diseases among the plants.
- (C) monopoly of developed countries.
- (D) monopoly of developing countries.

Correct Answer: (B) diseases among the plants.

SOLUTION:

The question is testing whether we can track a specific cause and effect chain the author lays out about farming, rather than assume a generic downside like a hidden health or economic risk.

1. **diseases among the consumers:** The passage never mentions any health effect on the people who eat the crop, only on the crop itself, so this misreads the passage.
2. **diseases among the plants:** The passage explicitly says a narrower genetic base makes crops 'more vulnerable to plant disease and epidemics.' This is a direct match to what the author writes.

3. **monopoly of developed countries:** Monopoly of developed nations is discussed elsewhere in terms of patent control, but it is not what this specific sentence about higher yield seeds says leads to disease risk.
4. **monopoly of developing countries:** This also does not appear anywhere near the sentence about seed varieties and genetic narrowing, and developing countries are not described as gaining a monopoly in the passage at all.

Since the passage's own wording ties higher yield seeds to a narrower genetic base and then straight to plant disease and epidemics, the only option that matches the text is diseases among the plants.

Let's summarize:

- Fewer crop varieties means a narrower genetic base.
- A narrower genetic base means the crop as a whole is more open to disease and epidemics.

So the correct answer is option B, diseases among the plants. **Option B**

Quick Tip: Follow the passage's chain: higher yield seeds reduce crop variety, which narrows the genetic base and raises disease risk in the crop itself.

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62.

Instructions: Read the following passage and answer the question based on it.

TRIPs agreement provides a comprehensive set of global trade rules for the protection of copyright, patents, trademarks, industrial designs, trade secrets, semiconductor layout designs, and geographical indications, that apply to all member countries irrespective of their levels of development, natural and human endowments and history. Every member country has been asked by the WTO to amend its national patent law to conform to that universal globalized format for legislation relating to pharmaceutical, agrochemical, food, alloys, etc. Under Article 65, the developed countries have been asked to change their laws within another five years, and the less developed countries within an additional five years. The least developed countries have been asked to make those changes by 2005 AD.

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As per the TRIPs agreement, not much differentiation is made between a developed country such as the USA and an undeveloped country such as Sudan. This statement is

- (A) definitely true
- (B) definitely false
- (C) probably true
- (D) probably false

Correct Answer: (B) definitely false

SOLUTION:

This question is really about spotting a stated fact that settles the matter outright, so that we can answer with 'definitely' rather than hedging with 'probably.'

1. **definitely true:** This would only work if the passage showed the same treatment for every country. It does not, since Article 65 lists three separate timelines by development level.

2. **definitely false:** The passage gives developed countries five years, less developed countries an additional five years, and least developed countries until 2005 AD. Three different deadlines for three different categories of countries is direct proof of differentiation, so the claim of 'not much differentiation' is false, and we know this for certain from the text itself.
3. **probably true:** 'Probably' would apply if we were guessing from indirect clues, but Article 65 states the different timelines outright, so there is no need to hedge in favor of the claim.
4. **probably false:** This gets the direction right but understates our confidence. Since the passage states the differing timelines as fact, we can rule out the claim with certainty, not just probability.

Because the passage explicitly lays out three different compliance timelines for developed, developing, and least developed countries, the claim that TRIPs makes 'not much differentiation' between a country like the USA and a country like Sudan is shown to be false directly from the text, not just likely false.

Let's summarize:

- Article 65 gives different deadlines to developed, developing, and least developed countries.
- Different deadlines by category is direct evidence of differentiation, which contradicts the statement in the question.

So the correct answer is that the statement is definitely false, option B. **Option B**

Quick Tip: Article 65 gives three different compliance deadlines by country category, which is itself proof of differentiation.

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63. A single word equivalent for the statement 'Speak falsely with deliberate intent' is

- (A) repudiate
- (B) prevaricate
- (C) disparage
- (D) equivocate

Correct Answer: (D) equivocate

SOLUTION:

Step 1: Understanding the Concept:

This is a one word substitution question, where we match a phrase to the single word that carries the same exact meaning. The phrase here has two parts: speaking falsely, and doing so on purpose.

Step 2: Key Formula or Approach:

Go through each option, pin down its dictionary meaning, and check whether it matches both parts of the phrase, 'false' and 'deliberate,' not just one of them.

Step 3: Detailed Explanation:

'Repudiate' means to formally reject or refuse to accept, as in repudiating a contract, so it fails the 'speak falsely' test entirely.

'Disparage' means to talk down about someone or something, showing contempt or lowering its reputation, which is about tone, not truthfulness, so it also fails.

'Prevaricate' means to speak evasively, dodging a straight answer, which is close but centers more on avoiding a topic than on stating something false with a clear intent to deceive.

'Equivocate' means to deliberately use vague or double meaning language so as to mislead or conceal the truth, matching both the 'false' part and the 'deliberate intent' part of the phrase exactly.

Step 4: Final Answer:

Since equivocate is the only option built around deliberately misleading speech, it is the correct single word substitute. **Option D: equivocate**

Quick Tip: Look for the word centered on deliberately misleading speech, not just evasive or insulting speech.

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64. Identify the option with the correct spelling.

- (A) paraphenalia
- (B) progame
- (C) pediatrics
- (D) beserk

Correct Answer: (C) pediatrics

SOLUTION:

Step 1: Understanding the Concept:

A correct spelling question is solved by comparing each option letter by letter against the standard dictionary spelling of the intended word, not just by how the word sounds.

Step 2: Key Formula or Approach:

Say each option aloud, guess the intended word, then mentally spell out the correct version of that word and compare it letter by letter with what is printed in the option.

Step 3: Detailed Explanation:

'paraphenalia' is missing an 'r,' the correct word is 'paraphernalia' (equipment or gear for an activity), spelled p-a-r-a-p-h-e-r-n-a-l-i-a.

'progame' is missing several letters from 'programme,' which is spelled p-r-o-g-r-a-m-m-e (or 'program' in the shorter American spelling), so 'progame' does not match either accepted form.

'pediatrics,' the branch of medicine for children's health, is spelled p-e-d-i-a-t-r-i-c-s, and the option matches this exactly, letter for letter.

'beserk' drops the 'r' after 'be,' the correct word is 'berserk' (wild or frenzied), spelled b-e-r-s-e-r-k.

Step 4: Final Answer:

Only 'pediatrics' matches its correct dictionary spelling exactly, while the other three options are each missing a letter from their intended words. **Option C: pediatrics**

Quick Tip: Check each option letter by letter against its correct dictionary spelling; three of the four are missing a letter.

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65.

Which two sentences in the following convey the same idea?

1. Wasn't there any checking at the airport?
2. I want to know if there was any checking at the airport.
3. I wonder if there should have been any checking at the airport.
4. There should have been checking at the airport.

- (A) 2, 3
(B) 1, 2
(C) 3, 4
(D) 2, 4

Correct Answer: (B) 1, 2

SOLUTION:

This question tests reading for meaning rather than reading for exact wording. Each option pairs two of the four sentences, and we need the pair that says the same thing using different grammar.

1. **2, 3:** Sentence 2 asks about a plain past fact ("was there checking"), while sentence 3 asks about an expectation ("should there have been checking"). These are different ideas, so this pairing is wrong.
2. **1, 2:** Sentence 1 is a direct question, "Wasn't there any checking at the airport?", and sentence 2 restates the same question indirectly, "I want to know if there was any checking at the airport." Both simply ask whether checking happened, so this pair matches.
3. **3, 4:** Sentence 3 questions whether checking should have happened, and sentence 4 states that it should have happened. Both share the idea of expectation, not the plain-fact question shared by 1 and 2, so this pairing is wrong.
4. **2, 4:** Sentence 2 is about a plain fact, while sentence 4 is about an expectation. These are different ideas, so this pairing is wrong.

The correct pair is sentences 1 and 2, since both simply ask whether the checking took place, just phrased as a direct question and an indirect question.

Let's summarize:

- Sentences 1 and 2 both ask about a plain past fact, using a direct question and an indirect question.
- Sentences 3 and 4 both talk about expectation or obligation using "should have been", a different idea from 1 and 2.

So the two sentences that convey the same idea are 1 and 2, option (B).

Quick Tip: Check which sentences ask about the same plain fact, comparing a direct question with its indirect version.

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66.

Choose the grammatically correct sentence.

- (A) You should at once report it to the concerned authority.
- (B) You should report it at once, to the authority concerned.
- (C) You should report it at once, to the concerned authority.
- (D) You should at once report it to the authority concerned.

Correct Answer: (D) You should at once report it to the authority concerned.

SOLUTION:

Step 1: Understanding the Concept:

This question checks two grammar points together: where to place the adverb "at once" in a sentence, and how to correctly use the word "concerned" when it means "the one in question" rather than "worried".

Step 2: Key Formula or Approach:

When "concerned" means "relevant to the matter" or "in question", it is placed after the noun it describes, as in "the person concerned" or "the authority concerned". Placed before the noun, "concerned" instead means "worried", which changes the meaning. Adverbs like "at once" also read most naturally when placed close to the verb they modify.

Step 3: Detailed Explanation:

Option (A) gets "at once" right but says "concerned authority", which wrongly implies a worried authority instead of the relevant one.

Option (B) gets "authority concerned" right but adds a comma that breaks the sentence into two unnatural parts.

Option (C) repeats both mistakes, the wrong "concerned authority" order and the unneeded comma.

Option (D) places "at once" naturally right after "should" and correctly uses "the authority concerned" to mean the relevant authority.

Step 4: Final Answer:

Option (D), "You should at once report it to the authority concerned," follows both rules correctly and reads smoothly.

Option (D)

Quick Tip: Recall that "concerned" meaning "relevant" goes after the noun, as in "authority concerned", not before it.

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67.

Find the correct match of grammatical function with usage for the word: AFTER

Grammatical function	Usage
1) adjective	(6) It appears to be the after effect of the disease.
2) adverb	(8) He came soon after.
3) conjunction	(5) You may go after having your lunch.
4) preposition	(7) Many graduates are hankering after jobs.

- (A) 1-8, 2-5, 3-6, 4-7
- (B) 1-6, 2-5, 3-8, 4-7
- (C) 1-5, 2-8, 3-7, 4-6
- (D) 1-6, 2-8, 3-5, 4-7

Correct Answer: (D) 1-6, 2-8, 3-5, 4-7

SOLUTION:

The word "after" can act as four different parts of speech, and this question checks whether we can tell them apart by looking at what surrounds "after" in each sentence.

1. **1-8, 2-5, 3-6, 4-7:** This pairs the adjective function with sentence (8), "He came soon after," which has no noun after "after" and so cannot be the adjective use.
2. **1-6, 2-5, 3-8, 4-7:** Sentence (5), "You may go after having your lunch," joins two clauses and is a conjunction, not an adverb, so pairing it with function 2 is wrong.
3. **1-5, 2-8, 3-7, 4-6:** Sentence (5) is a conjunction, not an adjective, so pairing it with function 1 is wrong, and sentence (6), the adjective use "after effect," cannot belong with the preposition function either.
4. **1-6, 2-8, 3-5, 4-7:** Sentence (6) has "after" describing the noun "effect", the adjective use. Sentence (8) has "after" alone with no object, the adverb use. Sentence (5) has "after" joining two clauses, the conjunction use. Sentence (7) has "after" followed by the noun "jobs", the preposition use. Every pairing fits its function correctly.

Only the fourth combination places every sentence in its correct grammatical role, so option (D), 1-6, 2-8, 3-5, 4-7, is correct.

Let's summarize:

- Adjective "after" sits right before the noun it describes, as in "after effect".
- Adverb "after" stands alone with no noun following it, as in "came soon after".
- Conjunction "after" joins two clauses, as in "after having your lunch".
- Preposition "after" is followed by a noun showing pursuit or time, as in "hankering after jobs".

The correct match is 1-6, 2-8, 3-5, 4-7, option (D).

Quick Tip: Check whether "after" sits before a noun, stands alone, joins two clauses, or takes an object noun.

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68.

NEOPHYTE is the opposite of

- (A) student
- (B) clown
- (C) veteran
- (D) professional

Correct Answer: (C) veteran

SOLUTION:

Step 1: Understanding the Concept:

"Neophyte" is a noun that means a person who is new to a subject, skill, or organization, someone just starting out.

Step 2: Key Formula or Approach:

To find an antonym, we look for a word that sits at the opposite end of the same scale, here the scale of experience, running from "brand new" to "highly experienced".

Step 3: Detailed Explanation:

"Student" still suggests someone in the process of learning, so it sits closer to "neophyte" than opposite it.

"Clown" describes a role or personality trait unrelated to experience, so it does not belong on the experience scale at all.

"Professional" often implies skill, but a person can be a professional and still be new to a role, so it does not guarantee the opposite of "beginner".

"Veteran" specifically means a person who has spent a long time in a field and built up deep experience, placing it at the far opposite end of the scale from "neophyte".

Step 4: Final Answer:

"Veteran" is the word that means the opposite of "neophyte", so option (C) is correct.

veteran

Quick Tip: Think of a word meaning highly experienced, the opposite of a beginner.

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69.

Find the maximum number of times that any one of the given words fits the set of sentences.

Words: disabled, flimsy, crippled, lame

1. Don't make _____ excuses.
2. Liberalization may have _____ smaller manufacturers.
3. Being a defaulter at the stock exchange makes him a _____ duck.
4. A _____ person may limp.

- (A) in all the four sentences
- (B) in three sentences
- (C) in two sentences
- (D) in only one

Correct Answer: (C) in two sentences

SOLUTION:

This question checks which of the four words, disabled, flimsy, crippled, or lame, fits the largest number of the four given sentences in its most natural, idiomatic sense.

1. **in all the four sentences:** No single word from the list naturally fits all four blanks, since each sentence calls for a specific word based on common usage.
2. **in three sentences:** Testing each word shows none of them fits three of the four sentences naturally, since the four sentences split evenly between two different words.
3. **in two sentences:** "Lame" fits sentence 1 ("lame excuses") and sentence 3 ("lame duck", the idiom for someone discredited). "Crippled" fits sentence 2 (liberalization crippling small manufacturers) and sentence 4 (a crippled person may limp). Both words reach exactly two sentences each, and no word beats this count.
4. **in only one:** This undercounts the fit, since both "lame" and "crippled" clearly work in two sentences each, not just one.

Testing all four words against all four sentences shows "lame" and "crippled" each complete exactly two sentences, and neither word manages three or four, so the maximum is two sentences.

Let's summarize:

- "Lame" fits the idioms "lame excuse" and "lame duck", covering sentences 1 and 3.
- "Crippled" fits the sense of being badly weakened or physically disabled, covering sentences 2 and 4.

So the maximum number of sentences that any single word fits is two, option (C).

Quick Tip: Test each word in every sentence and count how many sound natural or idiomatic.

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70.

Which of the following does not make a sensible word/phrase when added to the given word?

Word: FIRE

- (A) fly
- (B) engine
- (C) stick
- (D) escape

Correct Answer: (C) stick

SOLUTION:

Step 1: Understanding the Concept:

We need to combine the word "fire" with each option and check which combination fails to form a recognized English word or phrase.

Step 2: Key Formula or Approach:

A valid combination should either exist in the dictionary as one word or be a widely used and understood phrase. We test each option one at a time.

Step 3: Detailed Explanation:

"Fire" plus "fly" gives "firefly", the name of the small glowing insect, a recognized dictionary word.

"Fire" plus "engine" gives "fire engine", the standard name for a firefighting vehicle, a recognized phrase.

"Fire" plus "stick" gives "fire stick", which is not an established English word or common phrase in standard usage.

"Fire" plus "escape" gives "fire escape", the well-known term for an emergency exit staircase, a recognized phrase. Three of the four combinations, firefly, fire engine, and fire escape, are standard and sensible, while "fire stick" stands out as not forming a proper combination.

Step 4: Final Answer:

The option that does not make a sensible word or phrase with "fire" is "stick", so option (C) is correct.

stick

Quick Tip: Try combining "fire" with each word and check if the result is a real, recognized English term.

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71.

Arrange the sentences 1, 2, 3, 4 to form a logical sequence between sentences I and II. Choose the alternative where the four combinations make a meaningful sentence.

I. We all value having the freedom

1. which many of us fail to honour
2. to make the choices we want in our careers
3. but with great freedom comes great responsibility
4. so most companies fall prey to the policies which become rigid

II. and that's probably one reason we find most companies not following what they preach

- (A) 1, 3, 4, 2
(B) 2, 3, 1, 4
(C) 1, 4, 2, 3
(D) 3, 2, 1, 4

Correct Answer: (B) 2, 3, 1, 4

SOLUTION:

This question tests our ability to spot the logical thread connecting an opening line, four scrambled fragments, and a closing line into one coherent sentence. A good way to check is to see which fragment leads naturally into the next, from sentence I all the way to sentence II.

1. **1, 3, 4, 2:** Starting with fragment 1, "which many of us fail to honour," right after sentence I makes no sense, since sentence I has not yet introduced anything that "many of us fail to honour."
2. **2, 3, 1, 4:** Fragment 2 completes sentence I into "the freedom to make the choices we want in our careers." Fragment 3 adds the contrast "but with great freedom comes great responsibility." Fragment 1 then explains that this responsibility is "what many of us fail to honour," and fragment 4 gives the result, "so most companies fall prey to the policies which become rigid," which flows straight into sentence II about companies not practicing what they preach. Every link makes sense in order.
3. **1, 4, 2, 3:** Placing fragment 1 immediately after sentence I again fails, since there is no responsibility mentioned yet for "which many of us fail to honour" to refer back to.

4. **3, 2, 1, 4:** Starting with fragment 3, "but with great freedom comes great responsibility," right after sentence I is illogical, since sentence I has not yet finished naming what the freedom is for.

Only the order 2, 3, 1, 4 keeps every fragment's reference pointing to something already introduced, and it lands smoothly on sentence II.

Let's summarize:

- Sentence I needs an object for "the freedom," which only fragment 2 supplies.
- Fragment 1's "which" needs an antecedent, supplied by the "responsibility" in fragment 3.
- Fragment 4 gives the consequence that connects naturally into sentence II.

So the correct sequence is 2, 3, 1, 4, option (B).

Quick Tip: Find which fragment first completes "the freedom to...", then follow the cause-and-effect chain to sentence II.

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72.

Instructions [72-74]: Read the edited excerpt of an article by Nelson Vinod Moses and answer the question in this context.

A successful non-resident Indian employed in the United States returns to a backward Indian village and transforms the lives of the villagers. Sounds familiar? At 31, Ashwin Naik is pacing through the path Shah Rukh Khan traced in his off-bear Bollywood movie, *Swades*. Naik had just quit his cushy job in a genomics firm in the US to join MIT Sloan School of Business. With a month in hand, he headed home and travelled through the remote areas of Bagalkot district in Karnataka. The woeful social conditions he saw moved him. Naik chucked the MBA course and in six months set up Vaatsalya Healthcare, a rural healthcare delivery system. In February 2005, Vaatsalya's first hospital opened in Hubli. Two more centres were opened in Gadag and Karwar to offer specialist services of surgeons and facilities such as physiotherapy for children suffering from cerebral palsy. "We introduced paediatric surgery for infants below six months," says Naik. "Else, patients would have to be taken to distant cities of Hubli or Bangalore." Naik plans 100 more units in five states in the next three years. Mere charity by an affluent, middle-class professional? Far from it. Vaatsalya is one among rapidly spreading 'for profit' social enterprises that serve the poor and bring in profit. Mumbai-based Ziqitza, an imbalance services company, is another. It never refuses a patient for money, and charges Rs. 50 to 200. Done fleetingly in India and elsewhere till now, entrepreneurial minds with a social conscience are methodically creating such models at a greater pace. "There has been a boom in the past two years," says Varun Sahni, country director of Acumen Fund, a US based social fund that invests in companies that target low income communities. "Currently, there are about 1,000 in India." The timing seems perfect. There is a wide market acceptance and funding has been coming in easily. These enterprises work across a swathe of areas including healthcare, education, rural energy, agriculture, arts and crafts, banking and more. 'For profit' entrepreneurs are obsessed with social and environmental impact in addition to the financial returns. Since they are answerable to the investors, they try expanding the business rapidly. SKS Microfinance, for instance, started in 1998 and has now over 900,000 customers, 440 branches and an outstanding loan disbursement of over Rs. 452 crores as of August 2007.

Identify the appropriate business model of the kind of enterprise described by the author.

- (A) Servicing societies at no profit
- (B) Profiting from poor people
- (C) Setting up enterprises for masses of low-income groups on experimental basis
- (D) Setting up enterprises for social causes for profit and expand rapidly

Correct Answer: (D) Setting up enterprises for social causes for profit and expand rapidly

SOLUTION:

The passage describes Vaatsalya Healthcare, Ziqitza, and similar ventures as "for profit" social enterprises that serve poor and rural populations while also generating revenue and expanding fast, unlike pure charities.

1. **Servicing societies at no profit:** The passage repeatedly stresses that these ventures are "for profit" and explicitly says "mere charity... far from it," so a no-profit model contradicts the passage directly.
2. **Profiting from poor people:** The passage shows these enterprises charging affordable rates, and Ziqitza never refuses a patient for lack of money, so they serve the poor rather than exploiting them for profit, which misreads the author's intent.
3. **Setting up enterprises for masses of low-income groups on experimental basis:** The passage describes rapid, planned expansion, with Naik planning 100 more units in five states and SKS Microfinance already reaching 900,000 customers and 440 branches, which is far beyond a small-scale experiment.
4. **Setting up enterprises for social causes for profit and expand rapidly:** This matches the passage closely. The enterprises target social causes like healthcare and rural energy, they earn profit to stay financially viable, and being "answerable to investors" pushes them to expand quickly, as shown by Naik's 100-unit plan and SKS Microfinance's growth.

The business model the author describes combines a social mission with a for profit structure and fast, investor-driven growth, which is exactly option (D).

Let's summarize:

- The passage rules out pure charity ("mere charity... far from it") and rules out exploiting the poor, given the affordable, need-based pricing described.
- It stresses profit, investor accountability, and rapid scaling as the defining traits of these enterprises.

So the correct business model is "setting up enterprises for social causes for profit and expand rapidly," option (D).

Quick Tip: Look for the author's own words describing the enterprises as "for profit" and rapidly expanding, not charity.

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73.

Read the passage and answer the question that follows.

Vaatsalya Healthcare is one among a rapidly spreading group of "for profit" social enterprises that serve the poor and still bring in profit. Mumbai based Ziqitza, an ambulance services company, is another; it never refuses a patient for lack of money and charges only Rs. 50 to Rs. 200. Entrepreneurial minds with a social conscience are now building such models at a much faster pace than before. Varun Sahni, country director of Acumen Fund, a US based social fund that invests in companies targeting low income communities, says there has been a boom in such enterprises over the past two years, with about 1,000 of them now operating in India. These enterprises work across healthcare, education, rural energy, agriculture, arts and crafts, banking and more. "For profit" entrepreneurs care about social and environmental impact along with financial returns, and because they are answerable to investors, they try to expand the business rapidly. SKS Microfinance, for instance, started in 1998 and now has over 900,000 customers, 440 branches and an outstanding loan disbursement of over Rs. 452 crore as of August 2007.

Which of the following companies does not illustrate the idea explained by the author?

- (A) SKS Microfinance
- (B) Acumen Fund
- (C) Ziqitza
- (D) Vaatsalya Healthcare

Correct Answer: (B) Acumen Fund

SOLUTION:

Step 1: Understanding the Question:

The passage talks about a set of "for profit" social enterprises, businesses that serve poor and low income people while still earning money and growing. We are asked which of the four listed names does NOT count as one of these enterprises.

Step 2: Key Formula or Approach:

Go back to the passage and check, for each option, whether that name is described as running a business that sells a service to the poor, or whether it is described doing something else, such as only providing funding.

Step 3: Detailed Explanation:

SKS Microfinance is described with hard numbers, over 900,000 customers, 440 branches, Rs. 452 crore in loans disbursed. That is a lender earning interest from low income borrowers, so it fits.

Ziqitza is called an ambulance services company that charges patients Rs. 50 to Rs. 200 and never refuses one for lack of money. That is also a direct paid service to the poor, so it fits.

Vaatsalya Healthcare is the enterprise the whole passage is built around, a hospital chain bringing care like paediatric surgery to smaller cities. It fits perfectly.

Acumen Fund, however, is introduced with a different job description: "a US based social fund that invests in companies that target low income communities." It hands out capital to other enterprises, it does not itself sell healthcare, transport or loans to poor customers.

Step 4: Final Answer:

Since Acumen Fund is a financing body rather than a direct service enterprise, it is the one option that does not illustrate the author's idea.

Quick Tip: Look at which option only provides money to other businesses instead of directly serving low income customers itself.

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74.

Read the passage and answer the question that follows.

Vaatsalya Healthcare is one among a rapidly spreading group of "for profit" social enterprises that serve the poor and still bring in profit. Mumbai based Ziqitza, an ambulance services company, is another; it never refuses a patient for lack of money and charges only Rs. 50 to Rs. 200. Entrepreneurial minds with a social conscience are now building such models at a much faster pace than before. Varun Sahni, country director of Acumen Fund, a US based social fund that invests in companies targeting low income communities, says there has been a boom in such enterprises over the past two years, with about 1,000 of them now operating in India. These enterprises work across healthcare, education, rural energy, agriculture, arts and crafts, banking and more. "For profit" entrepreneurs care about social and environmental impact along with financial returns, and because they are answerable to investors, they try to expand the business rapidly. SKS Microfinance, for instance, started in 1998 and now has over 900,000 customers, 440 branches and an outstanding loan disbursement of over Rs. 452 crore as of August 2007.

According to the author, which of the following options describes "for profit" entrepreneurs most appropriately?

- (A) NRIs paying back to their motherland
- (B) Those affluent, middle-class professionals treating it as charity
- (C) Those who work towards getting financial returns on social business by expanding quickly
- (D) Those who have sympathetic investors for their business ideas for the poor

Correct Answer: (C) Those who work towards getting financial returns on social business by expanding quickly

SOLUTION:

The author gives a direct definition of "for profit" entrepreneurs in the passage: they care about social impact alongside financial returns, and because investors hold them accountable, they push to grow their business fast. We check each option against that definition.

1. **NRIs paying back to their motherland:** The passage never brings up NRIs or the idea of "paying back" a home country, so this option is simply not supported by the text.
2. **Those affluent, middle-class professionals treating it as charity:** The passage directly rejects this idea with the line "Mere charity by an affluent, middle-class professional? Far from it." This option describes the opposite of what the author is saying.
3. **Those who work towards getting financial returns on social business by expanding quickly:** This closely echoes the passage's own words about seeking "financial returns" and trying to "expand the business rapidly", so it matches.
4. **Those who have sympathetic investors for their business ideas for the poor:** The passage says these entrepreneurs answer to investors, it does not describe the investors as simply sympathetic backers, so this option shifts the focus away from what the passage actually says.

The only option that echoes the passage's actual definition, financial returns plus rapid expansion, is the third one.

Let's summarize:

- The passage rules out the charity framing directly.
- NRIs and sympathetic investors are never discussed in the passage.
- The passage's own words match the option about financial returns and rapid expansion.

So the correct description of "for profit" entrepreneurs is option C.

Quick Tip: Match the options against the passage's own line about financial returns and rapid expansion.

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75.

A contextual usage is provided for the word below. Pick the word that is most inappropriate.

MALINGER: The young man made it a point to malingering in spite of the assigned work load.

- (A) Wander
- (B) Laze
- (C) Evade
- (D) Argue

Correct Answer: (D) Argue

SOLUTION:

Step 1: Understanding the Concept:

Malingering means to pretend to be ill, weak or unable to work, purely to avoid a duty or a task. The example sentence uses it to describe someone dodging his work load on purpose.

Step 2: Key Formula or Approach:

For a "most inappropriate word" question, check each option against the core sense of the given word, which here is avoiding work through some form of pretence or idleness, and find the one option that breaks away from that sense.

Step 3: Detailed Explanation:

Wander carries a sense of aimless movement, which can describe someone drifting away from their duties instead of doing them, so it loosely fits.

Laze means to be idle and lazy, which is very close to the picture of someone shirking assigned work.

Evade means to dodge or escape a responsibility, which is close to the exact meaning of malingering.

Argue means to state or debate an opposing view, often heatedly. It says nothing about pretending illness or dodging duty, it is about disagreement in speech, a completely different idea.

Step 4: Final Answer:

Since argue has no connection with shirking work or feigning illness, it is the one word that does not belong.

Argue, option D

Quick Tip: Malingering means to fake being unwell to avoid work. Find the option unrelated to avoiding duty.

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76.

The following is a scrambled sentence with the segments marked 1, 2, 3 and 4. Choose the alternative with the order of segments that best reconstructs the sentence.

1. For all the padre's rhetoric about the English as God's Chosen People, the padre had a whole tribe of Anglo-Indian first cousins.
2. Padre Rotton was an even more striking case.
3. By various Indian wives, all of whom were at that moment engaged in fighting on the rebel side in Avadh, where they took an active part in besieging the British Residency in Lucknow.
4. These included James Rotton who could not speak English and the twenty two Muslim sons of his convert cousin, Felix Rotton.

- (A) 1, 2, 3, 4
(B) 2, 1, 4, 3
(C) 1, 4, 2, 3
(D) 2, 4, 1, 3

Correct Answer: (B) 2, 1, 4, 3

SOLUTION:

To reorder a scrambled passage, find the sentence that can stand as a natural opening (it introduces the subject without relying on a pronoun or connector that needs an earlier sentence), then follow the chain of "this refers to that" links between the remaining sentences.

1. **Sentence 2** ("Padre Rotton was an even more striking case.") reads like the first line of a new paragraph, it names the person under discussion and signals that a comparison is coming, so it opens the passage.
2. **Sentence 1** ("For all the padre's rhetoric... a whole tribe of Anglo-Indian first cousins.") directly follows sentence 2, unpacking why Padre Rotton is "a striking case": despite his own preaching, he was surrounded by mixed-race relatives.
3. **Sentence 4** ("These included James Rotton... twenty two Muslim sons of his convert cousin, Felix Rotton.") picks up the word "these" from "a whole tribe of Anglo-Indian first cousins" in sentence 1 and lists them by name, so it must sit right after sentence 1.
4. **Sentence 3** ("By various Indian wives... besieging the British Residency in Lucknow.") explains how those cousins came about (through various Indian wives) and adds the closing detail about the rebellion, so it comes last.

Checking the answer choices against this chain: 1, 2, 3, 4 breaks the "these included" link between 1 and 4. 1, 4, 2, 3 opens with sentence 1, but sentence 1 needs sentence 2 to establish who "the padre" is. 2, 4, 1, 3 puts the named list before the general statement it explains, which reverses the logic. Only 2, 1, 4, 3 keeps every link intact.

Let's summarize:

- Sentence 2 introduces Padre Rotton as the subject.
- Sentence 1 explains the irony of his many Anglo-Indian cousins.

- Sentence 4 names those cousins, following on from "a whole tribe."
- Sentence 3 closes with how they came about and the rebellion detail.

So the correctly ordered sentence follows the sequence 2, 1, 4, 3, which is option B.

Quick Tip: Start with the sentence that introduces Padre Rotton by name, then follow the "these included" reference chain.

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77.

Choose the sentence in which the given word is used correctly (grammatically and semantically). Word: **ALMOST**

- (A) As I crossed the road a scooterist almost hit me.
- (B) Crossing the road a scooterist hit me almost.
- (C) A scooterist across the road almost hit me.
- (D) A scooterist almost hit me crossing the road.

Correct Answer: (A) As I crossed the road a scooterist almost hit me.

SOLUTION:

Step 1: Understanding the Concept:

"Almost" is an adverb of degree meaning "nearly, but not completely." Adverbs like this normally sit right next to, usually just before, the word or action they are limiting.

Step 2: Key Formula or Approach:

Locate the verb that describes the near event (here, "hit"), then check each sentence to see if "almost" sits right before that verb, and whether the rest of the sentence stays logical and unambiguous.

Step 3: Detailed Explanation:

In option A, "a scooterist almost hit me" places "almost" directly before "hit", so the sentence clearly says the hit nearly, but did not, happen, and "as I crossed the road" clearly tells us the speaker was the one crossing.

In option B, "hit me almost" puts "almost" after the verb, which reads awkwardly and can suggest the hit already occurred.

In option C, "a scooterist across the road" places the scooterist on the far side of the road, which makes "almost hit me" illogical since someone on the opposite side of the road could not nearly hit a pedestrian.

In option D, "crossing the road" is left dangling at the end, so it is not clear if the speaker or the scooterist was crossing, which makes the sentence ambiguous even though "almost hit me" itself is correctly placed.

Step 4: Final Answer:

Option A is the only sentence where "almost" is correctly placed before "hit" and the meaning stays clear and logical.

Option A

Quick Tip: "Almost" must sit right before the verb it modifies, and the sentence must stay logically clear.

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78.

In the following sentence choose the erroneous segment.

- A. We took a taxi
- B. so we would be on time for the meeting
- C. (no further segment; the sentence ends here in the source)

- (A) Error in segment A
- (B) Error in segment B
- (C) Error in segment C
- (D) No error

Correct Answer: (B) Error in segment B

SOLUTION:

This sentence, "We took a taxi so we would be on time for the meeting," is broken into segment A and segment B (segment C is empty here, marking the end of the sentence). We need to find which segment carries the grammatical error.

1. **Segment A, "We took a taxi":** This is a plain, correctly formed clause, subject "we", verb "took", object "a taxi". No error here.
2. **Segment B, "so we would be on time for the meeting":** This clause is meant to state the purpose behind taking the taxi, not just a result of it. Purpose clauses in formal written English take the conjunction "so that", not a bare "so". As written, the word "that" is missing, which makes the connection read as loose and incomplete rather than a properly formed clause of purpose.
3. **Segment C:** This segment has no text in the given sentence, it simply marks that the sentence has ended, so there is nothing here to be right or wrong.

Rewriting the sentence correctly gives "We took a taxi so that we would be on time for the meeting." The missing word belongs in segment B, so that is where the error lies.

Let's summarize:

- Segment A is a correct, simple clause.
- Segment B is missing "that" after "so", which a purpose clause needs.
- Segment C is empty and carries no error.

The erroneous segment is segment B, option B.

Quick Tip: Purpose clauses need "so that", not a bare "so". Check segment B for the missing word.

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79.

Find the ODD one out from the group of words which are related in some way or the other.

- (A) din
- (B) cacophony
- (C) racket
- (D) cadence

Correct Answer: (D) cadence

SOLUTION:

Step 1: Understanding the Concept:

This is a classification question: three of the four words share a common meaning and one does not belong.

Step 2: Key Formula or Approach:

Define each word in plain terms and sort them into groups by meaning, loud and unpleasant sound versus something else.

Step 3: Detailed Explanation:

Din means a loud, continuous, unpleasant noise.

Cacophony means a harsh, jarring mixture of sounds.

Racket, in this sense, means a loud and disturbing noise.

Cadence means the rhythmic flow or rise and fall of sound, most often used about music or speech, and it is neutral to pleasant in tone, not a description of unwanted noise at all.

Din, cacophony and racket all sit in the same group: loud, unpleasant sound. Cadence sits in a different group entirely: ordered, rhythmic sound.

Step 4: Final Answer:

Since cadence does not describe loud, unpleasant noise the way the other three words do, it is the odd one out.

Cadence, option D

Quick Tip: Three words mean loud, unpleasant noise. One means a pleasant rhythmic flow of sound.

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80.

Fill in the blanks with the correct alternative.

Caw is to crows as is to cows.

- (A) bleat
- (B) snort
- (C) low
- (D) bellow

Correct Answer: (C) low

SOLUTION:

This is a straightforward analogy of animal to characteristic sound: caw is the word used specifically for a crow's call, so we need the word used specifically for a cow's call.

1. **Bleat:** This is the call made by sheep and goats, not cows, so it does not match.
2. **Snort:** This is a short, forceful sound pushed out through the nose, generally linked with horses or pigs, not the everyday call of a cow.
3. **Low:** Used as a verb, "to low" is the standard, dictionary-defined word for the deep sound cattle make, the same sound more commonly called a "moo". This is the exact counterpart to "caw" for crows.
4. **Bellow:** This describes a much louder, deeper roar, and is used mainly for bulls, elephants or a person shouting angrily, rather than the ordinary sound of a cow.

Between "low" and "bellow", "low" is the word specifically and traditionally paired with cows (as in the phrase "the lowing herd"), while "bellow" belongs more to bulls and larger, louder animals. Since the question wants a word matched to "cows" the same exact way "caw" is matched to "crows", "low" is the better fit.

Let's summarize:

- Bleat pairs with sheep and goats.
- Snort pairs with horses or pigs.
- Low is the specific, traditional word for the sound cows make.
- Bellow is a louder roar tied more to bulls or elephants.

The word that completes the analogy is "low", option C.

Quick Tip: Think of the specific verb for a cow's call, the same way "caw" is specific to crows.

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81. In 4 years, the simple interest (SI) on a certain sum of money is $\frac{7}{25}$ of the principal. What is the annual rate of interest?

- (A) 4%
(B) 4.5%
(C) 7%
(D) 9%

Correct Answer: (C) 7%

SOLUTION:

Step 1: Pick a convenient principal.

The interest is a fraction with denominator 25, so let the principal be $P = 25$. Any multiple of 25 works, since the rate does not depend on the actual size of P .

Step 2: Find the total interest earned.

$$\text{Interest over 4 years} = \frac{7}{25} \times 25 = 7.$$

Step 3: Find the interest earned per year.

$$\text{Interest per year} = \frac{7}{4} = 1.75.$$

Step 4: Convert this yearly interest into a rate percent.

$$\text{Rate percent} = \frac{\text{interest per year}}{\text{principal}} \times 100 = \frac{1.75}{25} \times 100.$$

$$\frac{1.75}{25} \times 100 = \frac{175}{25} = 7$$

Step 5: Match with the options.

A rate of 7% is exactly option C. None of the other rates (4%, 4.5%, 9%) reproduce an interest of 7 on a principal of 25 over 4 years.

Final Answer:

The annual rate of interest works out to 7%.

7%

Quick Tip: Use $SI = \frac{PTR}{100}$ with $SI = \frac{7}{25}P$ and $T = 4$; cancel P and solve for R .

...

82. Thirty days are in September, April, June and November; the other months have thirty-one days (except February). A month is chosen at random. What is the probability that the chosen month has exactly three days less than the maximum of 31, that is, exactly 28 days?

- (A) $\frac{15}{16}$
- (B) 1
- (C) $\frac{3}{48}$
- (D) None of these

Correct Answer: (D) None of these

SOLUTION:

This question is really asking: out of the 12 months of the year, how many have exactly 28 days, and what fraction is that? Three days less than the maximum of 31 days is $31 - 3 = 28$ days, and in an ordinary calendar year only February has 28 days. So the true probability is $\frac{1}{12}$. Now check each option against this value.

1. $\frac{15}{16}$: this equals **0.9375**, almost a certainty. That would mean nearly every month has 28 days, which is false, so this option is wrong.
2. **1**: this would mean every single month has 28 days, which is obviously false since most months have 30 or 31 days.
3. $\frac{3}{48}$: this simplifies to $\frac{1}{16} = \mathbf{0.0625}$. It looks close to $\frac{1}{12} \approx \mathbf{0.0833}$ but the two fractions are not equal, since $\frac{1}{12} \neq \frac{1}{16}$.
4. **None of these**: since the correct probability $\frac{1}{12}$ does not equal any of the first three fractions, this is the only option left standing.

Because $\frac{1}{12}$ cannot be written as $\frac{15}{16}$, as 1, or as $\frac{3}{48}$, the only option that can be correct is "None of these".

Let's summarize:

- Only February has 28 days out of the 12 months, giving a probability of $\frac{1}{12}$.
- $\frac{3}{48}$ reduces to $\frac{1}{16}$, a different fraction from $\frac{1}{12}$, so it is a near-miss distractor, not the answer.

The correct probability, $\frac{1}{12}$, is not among the first three choices, so the answer is "None of these".

Quick Tip: Three days less than 31 is 28 days; only February has 28 days, so the probability is $\frac{1}{12}$. Check whether this matches any listed fraction.

• • •

83. Two people are climbing up two different moving escalators, each of which has 120 visible steps. The ratio of the first person's stepping speed to the speed of the first escalator is 2:3. The ratio of the second person's stepping speed to the speed of the second escalator is 3:5. Find the total number of steps the two people actually step on, added together.

- (A) 85
(B) 93
(C) 80
(D) 75

Correct Answer: (B) 93

SOLUTION:

Step 1: Assign concrete speeds instead of using letters.

For the first escalator, pick numbers in the ratio 2 : 3: let the person's stepping speed be 2 steps per second and the escalator's speed be 3 steps per second. Their speeds add up on the way up, since escalator and person both move upward together.

Step 2: Find how long the first person takes to reach the top.

The escalator's visible length is 120 steps, and ground speed is $2 + 3 = 5$ steps per second, so time taken = $\frac{120}{5} = 24$ seconds.

In those 24 seconds, the person's own feet move at 2 steps per second, so steps actually stepped on = $2 \times 24 = 48$.

Step 3: Repeat for the second person with the 3 : 5 ratio.

Let the person's speed be 3 steps per second and the escalator's speed be 5 steps per second, so ground speed = $3 + 5 = 8$ steps per second.

Time taken = $\frac{120}{8} = 15$ seconds.

Steps stepped on = $3 \times 15 = 45$.

Step 4: Add the steps from both people.

$48 + 45 = 93$.

Step 5: Sanity check with different concrete numbers.

Using speeds of 4 and 6 steps per second (still ratio 2 : 3) for the first escalator gives time = $120/10 = 12$ seconds and steps = $4 \times 12 = 48$, the same answer as before, confirming the actual chosen numbers do not matter, only the ratio.

Final Answer:

The two people together step on 93 steps.

93

Quick Tip: Steps actually climbed = total steps $\times \frac{\text{person's speed}}{\text{person's speed} + \text{escalator's speed}}$. Apply this to both ratios and add the results.

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84. The table below shows the noon-time temperatures (in °F) recorded in a city over one week.

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Temperature	66	78	75	69	78	77	70

If m is the median temperature, f is the temperature that occurs most often (the mode), and a is the average (arithmetic mean) of the seven temperatures, which of the following gives the correct order of m , f and a ?

- (A) $a < m > f$
- (B) $a < m < f$
- (C) $m < a < f$
- (D) $m < f < a$

Correct Answer: (B) $a < m < f$

SOLUTION:

Step 1: Find the mean using the assumed-mean (deviation) method.

Take $A = 75$ as a convenient assumed mean, and find how far each value is from it: $66 - 75 = -9$, $78 - 75 = 3$, $75 - 75 = 0$, $69 - 75 = -6$, $78 - 75 = 3$, $77 - 75 = 2$, $70 - 75 = -5$.

Step 2: Add up the deviations.

Sum of deviations = $-9 + 3 + 0 - 6 + 3 + 2 - 5 = -12$.

Step 3: Adjust the assumed mean.

True mean = $A + \frac{\text{sum of deviations}}{n} = 75 + \frac{-12}{7} = 75 - 1.71 = 73.29$. This matches the direct-sum result, but skips adding seven large numbers directly.

Step 4: Find the median and mode by frequency counting.

Listing the values with how many times each appears: 66(1), 69(1), 70(1), 75(1), 77(1), 78(2). Arranged in order (66, 69, 70, 75, 77, 78, 78), the middle (4th) value is 75, so the median $m = 75$. The value with the highest count is 78 (count 2), so the mode $f = 78$.

Step 5: Compare the three figures.

$a = 73.29$, $m = 75$, $f = 78$. Since $73.29 < 75 < 78$, the relation is $a < m < f$.

Final Answer:

The correct ordering is $a < m < f$, matching option B.

$$a < m < f$$

Quick Tip: Sort the seven values to read off the median and mode, then add them up and divide by 7 for the mean; compare the three numbers.

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85. Inside a triangular park, a flower bed forms a triangle similar to the park's boundary. A uniform path runs around the flower bed, so that each side of the park is exactly double the corresponding side of the flower bed. What is the ratio of the area of the path to the area of the flower bed?

- (A) 1 : 1
- (B) 1 : 2
- (C) 1 : 3
- (D) 3 : 1

Correct Answer: (D) 3 : 1

SOLUTION:

Step 1: Test the relationship with an actual triangle.

Instead of working with the scale factor abstractly, pick a concrete right triangle for the flower bed, say with legs 3 and 4. Its area is $\frac{1}{2} \times 3 \times 4 = 6$ square units.

Step 2: Build the doubled triangle for the park.

Since every side of the park is double the corresponding side of the flower bed, the park triangle has legs 6 and 8 (still a right triangle, similar to the first one). Its area is $\frac{1}{2} \times 6 \times 8 = 24$ square units.

Step 3: Subtract to get the path's area.

Path area = park area – flower bed area = $24 - 6 = 18$ square units.

Step 4: Write the ratio.

$\frac{\text{path}}{\text{flower bed}} = \frac{18}{6} = 3$, so the ratio is 3 : 1.

Step 5: Confirm this does not depend on the triangle's shape.

Because the park and the flower bed are similar (not just any two triangles), doubling every side always multiplies the area by $2^2 = 4$, regardless of whether the triangle is right-angled, isosceles, or scalene. So the concrete example generalizes: path area is always 3 times the flower bed's area.

Final Answer:

The ratio of path area to flower bed area is 3 : 1.

$$\boxed{3 : 1}$$

Quick Tip: For similar figures with sides scaled by k , areas scale by k^2 . Here $k = 2$, so park area is 4 times the bed's area; subtract to get the path.

86. Consider the piecewise function

$$f(x) = \begin{cases} 3 - x, & x \leq 0 \\ x^2 + 2, & x > 0 \end{cases}$$

Evaluate $f(-3)$.

- (A) 6
- (B) 0
- (C) 11
- (D) -7

Correct Answer: (A) 6

SOLUTION:

A piecewise function is defined by different formulas depending on which range the input falls into. Here, $f(x) = 3 - x$ applies when $x \leq 0$, and $f(x) = x^2 + 2$ applies when $x > 0$. Since we want $f(-3)$ and -3 is less than 0, only the first rule can be used. Let's check what each option would require.

1. **6**: substituting $x = -3$ into the valid branch $3 - x$ gives $3 - (-3) = 3 + 3 = 6$. This matches the branch that actually applies to $x = -3$, so it is correct.
2. **0**: this would only happen from a sign error, computing $3 - 3$ instead of $3 - (-3)$. There is no legitimate way to reach 0 from either branch at $x = -3$.
3. **11**: this comes from plugging $x = -3$ into the wrong branch, $x^2 + 2 = 9 + 2 = 11$. That branch is reserved for $x > 0$, and -3 fails that condition, so this option uses the wrong formula.
4. **-7**: neither branch produces this value when $x = -3$ is substituted correctly, so it is simply an incorrect distractor.

Because $-3 \leq 0$, the rule $f(x) = 3 - x$ is the one that governs this input, and it gives $f(-3) = 6$.

Let's summarize:

- Always check which condition the input satisfies before picking a branch.
- Only after choosing the right branch should you substitute and simplify.

So the value of $f(-3)$ is 6.

Quick Tip: Since $-3 \leq 0$, use the branch $f(x) = 3 - x$, not $x^2 + 2$, which only applies for $x > 0$.

87. A special lottery is to be held to select one student who will live in the only deluxe room in a hostel. There are 100 Year-III, 150 Year-II and 200 Year-I students who applied. Each Year-III student's name is placed in the lottery drum 3 times, each Year-II student's name 2 times, and each Year-I student's name 1 time. What is the probability that a Year-III student's name will be drawn?

- (A) $\frac{1}{8}$
 (B) $\frac{2}{9}$
 (C) $\frac{2}{7}$
 (D) $\frac{3}{8}$

Correct Answer: (D) $\frac{3}{8}$

SOLUTION:

Step 1: Turn the entries into a simple ratio instead of raw totals.

The number of slips each group contributes is proportional to (number of students) times (entries per student).
 Write this as a ratio:

$$\text{Year-III} : \text{Year-II} : \text{Year-I} = (100 \times 3) : (150 \times 2) : (200 \times 1) = 300 : 300 : 200.$$

Step 2: Simplify the ratio.

Dividing every term by 100: $300 : 300 : 200 = 3 : 3 : 2$.

Step 3: Add the parts of the ratio.

$$\text{Total parts} = 3 + 3 + 2 = 8.$$

Step 4: Read off the Year-III share.

Year-III corresponds to 3 parts out of the total 8 parts, so its probability of being chosen is $\frac{3}{8}$.

Step 5: Cross-check against raw numbers.

The actual slip counts were 300, 300 and 200 out of 800 total, and $\frac{300}{800}$ also reduces to $\frac{3}{8}$, confirming the ratio shortcut gives the same result as working with the full totals.

Final Answer:

The probability that a Year-III student wins is $\frac{3}{8}$.

$\frac{3}{8}$

Quick Tip: Total slips = (students x entries per student) added across all three groups; probability for Year-III = its slip count divided by the total.

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88. The average of nine numbers is M , and the average of three of these numbers is P . If the average of the remaining six numbers is N , which of the following must be true?

- (A) $M = N + P$
 (B) $2M = N + P$
 (C) $3M = 2N + P$
 (D) $3M = 2P + N$

Correct Answer: (C) $3M = 2N + P$

SOLUTION:

Step 1: Think of M as a weighted average of the two sub-groups.

The 9 numbers split into a group of 3 (average P) and a group of 6 (average N). The overall average M is a weighted average of P and N , weighted by how many numbers are in each group.

Step 2: Write the weighted average formula.

$$M = \frac{(3 \times P) + (6 \times N)}{3 + 6}$$

Step 3: Simplify the denominator.

$$M = \frac{3P + 6N}{9}$$

Step 4: Clear the fraction.

Multiply both sides by 9:

$$9M = 3P + 6N.$$

Step 5: Divide through to simplify.

Divide every term by 3:

$$3M = P + 2N, \text{ which is the same as } 3M = 2N + P.$$

Step 6: Sanity check with real numbers.

Suppose the 3-number group is $\{3, 3, 3\}$ so $P = 3$, and the 6-number group is $\{6, 6, 6, 6, 6, 6\}$ so $N = 6$. All 9 numbers together average $M = \frac{9+36}{9} = 5$. Check: $3M = 15$ and $2N + P = 12 + 3 = 15$. The formula holds.

Final Answer:

The required relation is $3M = 2N + P$.

$$\boxed{3M = 2N + P}$$

Quick Tip: Convert averages to totals: sum of 9 = $9M$, sum of 3 = $3P$, so sum of remaining 6 = $9M - 3P$, and this divided by 6 equals N .

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89. The intersection of two cubes cannot be:

- (A) A cube
- (B) A triangle
- (C) A rectangle
- (D) None of these

Correct Answer: (A) A cube

SOLUTION:

This question checks whether you can picture what shape appears where two solid cubes cut into each other. It helps to think about what happens right at the boundary where the two solids meet, since that boundary is exactly what decides the shape of the intersection the options describe.

1. **Cube:** for the shared part of two cubes to be a cube itself, one of the cubes would need to sit flush inside the other over an entire cubical region with matching flat faces on every side. Two genuinely distinct cubes meeting or cutting into each other from an angle never do this, so a cube shaped overlap does not occur.
2. **Triangle:** if one cube is tilted so just a single corner pokes into a flat face of the other cube, the boundary of that overlap is a three sided patch, a triangle. This is achievable, so it is not the answer.
3. **Rectangle:** if a face of one cube is sliced straight across by an edge of the other, or two faces sit flush against each other, the shared patch is a four sided shape with right angles, a rectangle. This is also achievable.
4. **None of these:** since one of the three listed shapes (cube) genuinely cannot occur, this option does not apply.

Only the cube option describes something that can never be the shape of the overlap between two cubes, since triangles and rectangles are both ordinary results of one cube cutting into another at an angle, while a cube shaped overlap would need the two solids to stop being two separate cubes.

Let's summarize:

- Cutting a corner of one cube into a face of another gives a triangular patch.
- Lining up faces or slicing an edge through a face gives a rectangular patch.
- A cube shaped overlap would need one cube to occupy an entire cubical block that is also part of the other cube, which is not a genuine intersection of two separate cubes.

So the shape that the intersection of two cubes cannot be is a cube, option (A).

Quick Tip: Think about the flat boundary between two overlapping cubes: can that shared patch ever be an entire three dimensional cube itself?

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90. In a factory, the expected number of accidents per day is linearly related to the overtime hours x . On a day with $x = 1000$ overtime hours there were 8 accidents; on a day with $x = 400$ hours there were 5 accidents. What is the expected number of accidents when no overtime is logged ($x = 0$)?

- (A) 2
(B) 3
(C) 4
(D) 5

Correct Answer: (B) 3

SOLUTION:

Step 1: Find the rate of accidents per overtime hour.

Between the two given points, overtime hours change from 400 to 1000, a change of 600 hours, while accidents change from 5 to 8, a change of 3 accidents. Since the relationship is a straight line, this ratio is the same everywhere on the line:

$$\text{rate} = \frac{8 - 5}{1000 - 400} = \frac{3}{600} = \frac{1}{200} \text{ accidents per overtime hour}$$

Step 2: Walk back from a known point to $x = 0$.

Take the point (400, 5). To reach $x = 0$, go back 400 hours. Going back along a straight line means subtracting 400 times the rate from the accident count:

$$A(0) = 5 - 400 \times \frac{1}{200} = 5 - 2 = 3$$

Step 3: Cross check with the other point.

Starting instead from (1000, 8) and walking back 1000 hours at the same rate:

$$A(0) = 8 - 1000 \times \frac{1}{200} = 8 - 5 = 3$$

Both starting points give the same value, confirming the line is consistent.

Step 4: Conclusion.

With zero overtime hours logged, the factory would still expect 3 accidents a day on average, which is option (B).

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Quick Tip: Model accidents as a straight line $A = ax + c$ in overtime hours x ; c is exactly the value at $x = 0$ the question wants.

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91. A rainy day occurs once in every 10 days. Half of the rainy days produce rainbows. What percent of all days do not produce a rainbow?

- (A) 95%
- (B) 10%
- (C) 50%
- (D) 5%

Correct Answer: (A) 95%

SOLUTION:

This question is about combining two separate chances, the chance that a day is rainy and the chance that a rainy day also brings a rainbow, into one overall chance, and then flipping that around to find the chance of no rainbow.

Out of every 10 days, 1 day is rainy. Out of those rainy days, only half go on to produce a rainbow. So out of every 10 days, the number of days with an actual rainbow is $\frac{1}{2} \times 1 = 0.5$ days. In percentage terms, that is $\frac{0.5}{10} \times 100 = 5\%$ of all days.

1. **95%:** this is everything left over once the 5% rainbow days are removed from the full 100%, so it correctly represents the days without a rainbow.
2. **10%:** this looks like the frequency of rainy days doubled, or a slip where someone forgets to take "half of the rainy days" into account; it does not represent the no rainbow days.
3. **50%:** this would be the answer only if someone stopped at "half the rainy days produce rainbows" and mistook that for "half of all days", which is not what the question says.
4. **5%:** this is the percentage of days that DO get a rainbow, the opposite of what the question asks for.

The correct value is 95%, since only 5% of all days end up with a rainbow, so the remaining 95% do not.

Let's summarize:

- Chance of rain: 1 in 10 days, or 10%.
- Chance of a rainbow: half of the rainy days, so 5% of all days.
- Chance of no rainbow: the complement of 5%, which is 95%.

So 95% of all days do not produce a rainbow, option (A).

Quick Tip: Multiply the chance of rain by the chance a rainy day gives a rainbow, then subtract that result from 100%.

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92. Bags I, II, and III contain at least one ball each and together have 10 balls. How many balls are in each bag? Decide whether the statements are sufficient.

(1) Bag I contains five balls more than Bag III.

(2) Bag II contains half as many balls as Bag I.

- (A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- (B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- (C) BOTH statements (1) and (2) TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
- (D) EACH statement ALONE is sufficient.

Correct Answer: (C) BOTH statements (1) and (2) TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.

SOLUTION:

A data sufficiency question like this is not asking us to actually find the split of balls right away, it is asking whether the given clues pin down one and only one possible split. The trick is to test each statement on its own, by hunting for more than one set of values that fits, before checking both together.

1. **Statement (1) alone (Bag I has 5 more balls than Bag III):** writing $I = III + 5$ and plugging into $I + II + III = 10$ gives $II + 2III = 5$. Both $(III, II) = (1, 3)$ and $(III, II) = (2, 1)$ work, giving two different splits, (6,3,1) and (7,1,2). Since more than one answer fits, statement (1) alone is not sufficient.
2. **Statement (2) alone (Bag II is half of Bag I):** writing $II = I/2$ forces I to be even. Checking $I = 2, 4, 6$ all give valid positive values for Bag III (7, 4, 1 respectively). Multiple splits work here too, so statement (2) alone is not sufficient.
3. **Statements (1) and (2) together:** now both $I = III + 5$ and $II = I/2$ must hold at once. Combining them with the total of 10 leaves only one value of I that works, $I = 6$, which fixes $II = 3$ and $III = 1$. No other combination satisfies both conditions simultaneously, so together the statements give one unique split.

Since each statement by itself allows more than one possible distribution of balls, but the two together allow exactly one, the two statements are needed jointly and neither works alone.

Let's summarize:

- Statement (1) alone: two valid splits exist, not sufficient.
- Statement (2) alone: three valid splits exist, not sufficient.
- Both together: exactly one valid split, (6, 3, 1), sufficient.

So both statements together are required, matching option (C).

Quick Tip: Check each statement on its own for more than one valid (I, II, III) triple before trying them combined.

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93. Area of a square natural lake is 50 sq. kms. A diver wishing to cross the lake diagonally will have to swim a distance of:

- (A) 10 miles
- (B) 12 miles
- (C) 15 miles
- (D) None of these

Correct Answer: (D) None of these

SOLUTION:

Step 1: Convert the area itself to square miles first.

Rather than convert the final distance, convert the area up front. Since $1 \text{ km} \approx 0.625 \text{ miles}$ (the reciprocal of 1.6), one square kilometre is about $0.625^2 \approx 0.39$ square miles. So 50 sq. km is about:

$$50 \times 0.39 \approx 19.5 \text{ sq. miles}$$

Step 2: Find the side length in miles.

$$s = \sqrt{19.5} \approx 4.42 \text{ miles}$$

Step 3: Find the diagonal in miles.

$$d = s\sqrt{2} \approx 4.42 \times 1.414 \approx 6.25 \text{ miles}$$

Step 4: Compare with the answer choices.

Both routes, converting the distance at the end or converting the area at the start, land on the same figure, about 6.25 miles. None of the fixed options (10, 12, 15 miles) match this.

Step 5: Conclusion.

The diver actually swims close to **6.25** miles, so the correct choice is none of these, not any of the three specific mile values offered.

None of these

Quick Tip: Find the diagonal in km first (side times $\sqrt{2}$), then convert to miles before comparing with the options.

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94. If $n = 1 + x$, where x is the product of 4 consecutive positive integers, then which of the following is/are true?

1. n is odd
2. n is prime
3. n is a perfect square

- (A) 1 and 3 only
(B) 1 and 2 only
(C) 1 only
(D) None of these

Correct Answer: (A) 1 and 3 only

SOLUTION:

A quick way into this question is to test a few small cases of "4 consecutive positive integers" and look for a pattern, then confirm that pattern with a short piece of algebra so it holds for every case, not just the ones tested.

Take $k = 1, 2, 3, 4$ and compute x and $n = x + 1$ each time:

- $k = 1$: $x = 1 \times 2 \times 3 \times 4 = 24$, so $n = 25 = 5^2$.
- $k = 2$: $x = 2 \times 3 \times 4 \times 5 = 120$, so $n = 121 = 11^2$.
- $k = 3$: $x = 3 \times 4 \times 5 \times 6 = 360$, so $n = 361 = 19^2$.
- $k = 4$: $x = 4 \times 5 \times 6 \times 7 = 840$, so $n = 841 = 29^2$.

Every value of n came out odd and also a perfect square, and none of them were prime (25, 121, 361, and 841 are all composite). This strongly suggests statements 1 and 3 are always true and statement 2 is always false, but a pattern from four examples is not a proof, so it helps to see why algebraically.

1. **Statement 1, n is odd:** any run of 4 consecutive integers contains at least two even numbers, so their product x is always even. Adding 1 to an even number gives an odd number, so $n = x + 1$ is always odd.
2. **Statement 2, n is prime:** writing $x = k(k+1)(k+2)(k+3) = (k^2 + 3k)(k^2 + 3k + 2)$ and setting $m = k^2 + 3k$, we get $x = m^2 + 2m$, so $n = x + 1 = (m + 1)^2$. Since n is a perfect square greater than 1, it always has the factor pair 1 and n plus the middle factor $m + 1$, giving it at least three divisors. A number with more than two divisors is never prime, so statement 2 always fails.
3. **Statement 3, n is a perfect square:** the same identity $n = (m + 1)^2$ shows this directly. Whatever whole number $m + 1$ turns out to be, n is its square, so statement 3 always holds.

So statements 1 and 3 are always true for every choice of 4 consecutive positive integers, and statement 2 is never true, since a perfect square bigger than 1 cannot be prime.

Let's summarize:

- x , the product of 4 consecutive integers, is always even, making $n = x + 1$ always odd.
- $x + 1$ always simplifies to $(m + 1)^2$ where $m = k^2 + 3k$, so n is always a perfect square.
- A perfect square greater than 1 always has more than two divisors, so n is never prime.

The correct choice is "1 and 3 only", option (A).

Quick Tip: Write x as $(k^2 + 3k)(k^2 + 3k + 2)$ and notice this has the form $m(m + 2)$, so $x + 1$ is a perfect square.

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95. How many arrangements can be formed out of the letters of the word EXAMINATION so that vowels always occupy odd places?

- (A) 72,000
- (B) 86,400
- (C) 10,800
- (D) 64,000

Correct Answer: (C) 10,800

SOLUTION:

Instead of using the divide by repeats shortcut straight away, we can build the arrangement position by position, choosing spots for the repeated letters first. This is a slower but very concrete way to reach the same count, and it is a good check on the factorial method.

The word EXAMINATION has 11 letters. Splitting into vowels (E, A, A, I, I, O; 6 letters) and consonants (X, M, N, T, N; 5 letters), and noting that the 6 odd positions (1,3,5,7,9,11) exactly match the count of vowels, every vowel must go into an odd slot and every consonant into an even slot.

- Placing the vowels among the 6 odd slots:** first choose 2 of the 6 odd slots for the two A's, in $\binom{6}{2} = 15$ ways. From the remaining 4 slots, choose 2 for the two I's, in $\binom{4}{2} = 6$ ways. The last 2 slots take E and O, which can go in either order, in $2! = 2$ ways. Multiplying these choices: $15 \times 6 \times 2 = 180$ ways to place the vowels.
- Placing the consonants among the 5 even slots:** first choose 2 of the 5 even slots for the two N's, in $\binom{5}{2} = 10$ ways. The remaining 3 slots take X, M, and T in any order, in $3! = 6$ ways. Multiplying: $10 \times 6 = 60$ ways to place the consonants.
- Combining both halves:** the vowel placement and the consonant placement happen in separate, non overlapping sets of slots, so every choice of vowel arrangement can be paired with every choice of consonant arrangement. Total arrangements = $180 \times 60 = 10,800$.

This matches the factorial shortcut $\frac{6!}{2!2!} \times \frac{5!}{2!} = 180 \times 60 = 10,800$ exactly, confirming the count.

Let's summarize:

- 6 vowels must fill the 6 odd positions, in 180 distinct ways once repeats of A and I are accounted for.
- 5 consonants must fill the 5 even positions, in 60 distinct ways once the repeat of N is accounted for.
- The two placements are independent, so the totals multiply.

So the total number of valid arrangements is 10,800, option (C).

Quick Tip: Count the odd positions (6 of them) and notice it equals the number of vowels, so vowels and consonants split cleanly into two separate groups to arrange.

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96. In a school drill, a number of children are asked to stand in a circle. They are evenly spaced and the 6th child is diametrically opposite the 16th child. How many children are made to stand in the circle?

- (A) 16
- (B) 20
- (C) 22
- (D) None of these

Correct Answer: (B) 20

SOLUTION:

A neat way to check this without jumping straight to the halfway rule is to count around the circle from child 6 to child 16 in both directions and use the fact that being directly opposite means both paths around the circle are the same length.

1. **16 children:** going forward from position 6 to position 16 covers $16 - 6 = 10$ steps, and the remaining way around would only be $16 - 10 = 6$ steps. Since $10 \neq 6$, the two children are not opposite each other, so 16 does not work.
2. **20 children:** going forward from position 6 to position 16 still covers 10 steps. The remaining way around the circle covers $20 - 10 = 10$ steps as well. Both paths are equal at 10 steps each, exactly what "diametrically opposite" requires, so 20 works.
3. **22 children:** the forward gap is still 10 steps, but the remaining way around covers $22 - 10 = 12$ steps. Since $10 \neq 12$, the two children are not opposite, so 22 does not work.
4. **None of these:** since 20 already satisfies the condition exactly, this option does not apply.

Only when there are 20 children in total does the short way around from child 6 to child 16 (10 steps) match the long way around (also 10 steps), which is the actual meaning of being diametrically opposite.

Let's summarize:

- Two evenly spaced points are diametrically opposite only when both arcs between them are equal in length.
- The gap between position 6 and position 16 is fixed at 10 steps going one way.
- For the other way around to also be 10 steps, the circle must have $10 + 10 = 20$ children in total.

So the circle has 20 children, option (B).

Quick Tip: On an evenly spaced circle of N people, two positions are diametrically opposite exactly when they differ by $N/2$.

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97. A man purchased 40 fruits (apples and oranges) for Rs. 17. Had he purchased as many oranges as apples and as many apples as oranges (i.e., interchanged the counts), he would have paid Rs. 15. Find the cost of one pair consisting of one apple and one orange.

- (A) 70 paise
- (B) 60 paise
- (C) 80 paise
- (D) 1 rupee

Correct Answer: (C) 80 paise

SOLUTION:

Step 1: Understanding the Concept.

This is a swap-the-quantities problem. Instead of solving two equations formally, look at what happens when the two purchases are added together as one combined purchase.

Step 2: Key idea.

In the first trip he buys x apples and $40 - x$ oranges. In the second trip (after the swap) he buys $40 - x$ apples and x oranges.

Adding the apples bought across both trips: $x + (40 - x) = 40$ apples in total.

Adding the oranges bought across both trips: $(40 - x) + x = 40$ oranges in total.

So across the two trips together, he effectively bought exactly 40 apples and 40 oranges, no matter what x is.

Step 3: Use the total money spent.

Money spent across both trips = $17 + 15 = 32$ rupees.

This 32 rupees paid for 40 apples and 40 oranges together, so:

$$40a + 40b = 32$$

where a and b are the prices of one apple and one orange.

Step 4: Find the price of one pair.

Divide by 40 on both sides:

$$a + b = \frac{32}{40} = 0.8 \text{ rupees} = 80 \text{ paise}$$

This is the cost of one apple plus one orange together, matching option (C).

80 paise

Quick Tip: Add the two bill equations together, since apples and oranges bought across both trips always total 40 each.

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98. The number 311311311311311311 is

- (A) divisible by 3 but not by 11
- (B) divisible by 11 but not by 3
- (C) divisible by both 3 and 11
- (D) neither divisible by 3 nor by 11

Correct Answer: (D) neither divisible by 3 nor by 11

SOLUTION:

Step 1: Understanding the Concept.

Instead of digit sums, break the number into a known factor times a repeated block, then work in modular arithmetic.

Step 2: Key Formula or Approach.

The number is 311 written seven times, one block after another. Writing each new block shifts the earlier part three places left, which is the same as multiplying by 1000. So:

$$N = 311 \times (1000^6 + 1000^5 + 1000^4 + 1000^3 + 1000^2 + 1000 + 1)$$

Call the bracket R . We only need $N \bmod 3$ and $N \bmod 11$.

Step 3: Detailed Explanation.

Mod 3: $1000 \equiv 1 \pmod{3}$, since 999 is a multiple of 3, so every power of 1000 is also $\equiv 1 \pmod{3}$. Adding the 7 terms of R gives $R \equiv 7 \equiv 1 \pmod{3}$. Also $311 \equiv 2 \pmod{3}$, since $3 + 1 + 1 = 5 \equiv 2$. So $N \equiv 2 \times 1 = 2 \pmod{3}$, which is not 0, so N is not divisible by 3.

Mod 11: $1000 = 90 \times 11 + 10$, so $1000 \equiv -1 \pmod{11}$. Then $1000^k \equiv (-1)^k \pmod{11}$, so $R \equiv 1 - 1 + 1 - 1 + 1 - 1 + 1 = 1 \pmod{11}$, using four +1's and three -1's over the seven terms. Also $311 = 28 \times 11 + 3$, so $311 \equiv 3 \pmod{11}$. So $N \equiv 3 \times 1 = 3 \pmod{11}$, which is not 0, so N is not divisible by 11 either.

Step 4: Final Answer.

Since $N \bmod 3 = 2$ and $N \bmod 11 = 3$, neither remainder is zero, so the number is neither divisible by 3 nor by 11.

Neither divisible by 3 nor by 11

Quick Tip: Check the digit sum for divisibility by 3, and the alternating (odd minus even position) digit sum for divisibility by 11.

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99. A man earns 6% SI on his deposits in Bank A while he earns 8% simple interest on his deposits in Bank B. If the total interest he earns is Rs. 1800 in three years on an investment of Rs. 9000, what is the amount invested at 6%?

- (A) 3000
- (B) 6000
- (C) 4000
- (D) 4500

Correct Answer: (B) 6000

SOLUTION:

A quicker route than writing a full equation is to use a weighted average rate of interest, since the time period (3 years) is the same for both banks.

Over 3 years, Rs 9000 earns Rs 1800 in total, so the average rate of interest that actually applied, spread over the whole amount, works out to:

$$\text{average rate} = \frac{1800}{9000 \times 3} \times 100 = \frac{1800}{270} \approx 6.67\% \text{ per year}$$

This average of about **6.67%** lies between the two given rates, 6% and 8%, and sits closer to 6% than to 8%. By the rule of alligation, the two amounts split in the inverse ratio of their distance from this average.

Distance of 6% from the average: $6.67 - 6 = 0.67$. Distance of 8% from the average: $8 - 6.67 = 1.33$. So amount at 6% : amount at 8% = **1.33 : 0.67**, which simplifies to **2 : 1**.

Splitting Rs 9000 in the ratio **2 : 1** gives $9000 \times \frac{2}{3} = 6000$ at 6% and $9000 \times \frac{1}{3} = 3000$ at 8%.

Let's summarize:

- The overall interest rate earned on the full Rs 9000 works out to about **6.67%** per year.
- By alligation, this splits the money in the ratio **2 : 1** between the 6% and 8% accounts.

So the amount invested at 6% is Rs 6000, matching option (B).

Quick Tip: Let the amount at 6% be x, write one simple interest equation for 3 years, and solve for x.

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100. Two identical trains A and B running in opposite directions at the same speed take 2 minutes to cross each other completely. The number of bogies of A are increased from 12 to 16. How much more time would they now require to cross each other?

- (A) 40 s
- (B) 50 s
- (C) 60 s
- (D) 20 s

Correct Answer: (D) 20 s

SOLUTION:

Step 1: Understanding the Concept.

Both trains always travel at the same fixed speed before and after the change, so the crossing time is directly proportional to the combined length of the two trains, since the combined speed never changes. This means the actual speed value is not even needed; a simple ratio does the job.

Step 2: Key Formula or Approach.

time $\propto$ combined length, when combined speed stays constant. So:

$$\frac{\text{new time}}{\text{old time}} = \frac{\text{new combined length}}{\text{old combined length}}$$

Step 3: Detailed Explanation.

Old combined length (in bogies) = $12 + 12 = 24$.

New combined length = $16 + 12 = 28$.

Old time = 2 minutes = 120 seconds.

Using the proportion:

$$\text{new time} = 120 \times \frac{28}{24} = 120 \times \frac{7}{6} = 140 \text{ seconds}$$

Step 4: Final Answer.

Extra time required = $140 - 120 = 20$ seconds, which is option (D).

20 seconds

Quick Tip: Since speed stays the same, crossing time is proportional to the combined length (in bogies) of the two trains.

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101. A ladder is lying against a wall which is 5 metres high. If the ladder slips 2 metres away from the wall, the top of the ladder touches the foot of the wall. The length of the ladder is

- (A) 5 m
- (B) 5.25 m
- (C) 7.25 m
- (D) 4 m

Correct Answer: (C) 7.25 m

SOLUTION:

Step 1: Understanding the Concept.

The same two facts apply: the initial right triangle, and the final flat position. Here the equation is solved using the difference of squares instead of expanding brackets.

Step 2: Key Formula or Approach.

From the right triangle: $L^2 - x^2 = 25$, which factors as $(L - x)(L + x) = 25$. From the sliding condition: $L - x = 2$.

Step 3: Detailed Explanation.

Since $L - x = 2$ and $(L - x)(L + x) = 25$:

$$2(L + x) = 25 \Rightarrow L + x = 12.5$$

Now solve the pair $L - x = 2$ and $L + x = 12.5$ together. Adding them:

$$2L = 14.5 \Rightarrow L = 7.25$$

Subtracting them:

$$2x = 10.5 \Rightarrow x = 5.25$$

Step 4: Final Answer.

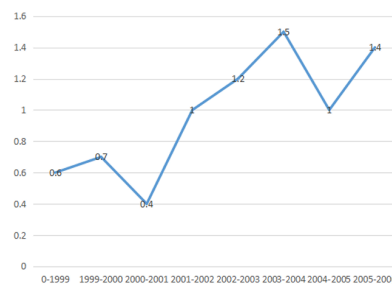
The ladder length is $L = 7.25$ m, confirming option (C).

7.25 m

Quick Tip: Use the right triangle formed initially (wall, ground, ladder), then note the ladder's final length equals the new base distance once it lies flat.

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102. The following line graph shows the ratio of wheat production to rice production of a state in India over 7 years, from 1999 to 2006. Answer the question based on this data.



If the rice production in 2003 was 4 lac tons, what was its wheat production during 2003?

- (A) 1.2 lac tons
- (B) 3.6 lac tons
- (C) 4.8 lac tons
- (D) 5.0 lac tons

Correct Answer: (C) 4.8 lac tons

SOLUTION:

Instead of multiplying directly, this can be solved by setting up a proportion, which helps when a ratio is given as "wheat : rice" rather than as a plain decimal.

From the graph, for the year 2003, wheat : rice = 1.2 : 1, which is the same as 6 : 5 (multiplying both parts by 5).

Let the wheat production be w lac tons. Since rice production is 4 lac tons, and the ratio of wheat to rice is 6 : 5:

$$\frac{w}{4} = \frac{6}{5}$$

Cross multiplying:

$$5w = 24 \Rightarrow w = 4.8$$

Let's summarize:

- The wheat to rice ratio for 2003 read off the graph is 1.2, equivalent to 6:5.
- Applying this ratio to the known rice production of 4 lac tons gives a wheat production of 4.8 lac tons.

So the wheat production in 2003 was 4.8 lac tons, matching option (C).

Quick Tip: Multiply the rice production by the wheat-to-rice ratio read off the graph for that year.

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103. The following line graph shows the ratio of wheat production to rice production of a state in India over 7 years, from 1999 to 2006. Answer the question based on this data.

In how many years was wheat production more than the rice production?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

Correct Answer: (B) 3

SOLUTION:

A quick way to answer this without checking each year one by one is to first list all seven ratio values from the graph, then split them into three simple groups.

The seven ratios (1999-2000 to 2005-2006) are: 0.7, 0.4, 1.0, 1.2, 1.5, 1.0, 1.4.

1. **Ratios below 1** (rice more than wheat): 0.7 and 0.4, that is 2 years.
2. **Ratios equal to 1** (wheat equal to rice, not "more"): 1.0 and 1.0, that is 2 years.
3. **Ratios above 1** (wheat more than rice): 1.2, 1.5 and 1.4, that is 3 years.

Since $2 + 2 + 3 = 7$, all seven years are accounted for, confirming no value was missed or double counted.

Let's summarize:

- Wheat exceeds rice only when the plotted ratio is strictly greater than 1.
- Exactly 3 of the 7 years satisfy this: 2002-2003, 2003-2004 and 2005-2006.

So the answer is 3 years, matching option (B).

Quick Tip: Count only the years where the plotted ratio is strictly greater than 1, not equal to 1.

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104. The following line graph shows the ratio of wheat production to rice production of a state in India over 7 years, from 1999 to 2006. Answer the question based on this data.

If the total annual grain requirement (wheat + rice) of the state is 5 lac tons and the rice production during 2001 was 3 lac tons, how much grain had to be imported from other states to fulfill the requirement?

- (A) 2.00 lac tons
- (B) 1.55 lac tons
- (C) 1.05 lac tons
- (D) 0.65 lac tons

Correct Answer: (D) 0.65 lac tons

SOLUTION:

Here is a second way to reach the same choice, working in percentages instead of lac tons directly.

From the graph, the wheat to rice ratio for 2001 is 0.4, so for every 1 unit of rice, the state grows 0.4 units of wheat. That means wheat production is 40% of rice production in that year.

Rice production is given as 3 lac tons, so wheat production is **40% of 3 = 1.2** lac tons.

Total home grown grain = $3 + 1.2 = 4.2$ lac tons, against a requirement of 5 lac tons. The gap to be filled by imports is:

$$5 - 4.2 = 0.8 \text{ lac tons}$$

Let's summarize:

- The state grows 4.2 lac tons of grain on its own in 2001, using the 0.4 wheat-to-rice ratio read from the graph.
- Against the 5 lac ton requirement, this leaves a gap of about 0.8 lac tons to be imported, which rounds to the closest listed choice.

Among the given options, this shortfall is nearest to 0.65 lac tons, so the answer is option (D).

Quick Tip: Find wheat production using the graph's ratio, add it to the given rice production, then subtract the total from the state's requirement.

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105. The profits of Biscuits India Ltd rose by 32% in the year 2006-07 compared to the year 2005-06. By what percentage did Biscuits India's Sales increase in 2006-07 compared to the previous year? (Assume: Profit = Sales - Expenses.) Decide whether the information given in the two statements below is enough to answer the question.

Statement (1): Expenses in 2006-07 were Rs 1,400 crores, compared to Rs 1,220 crores in 2005-06.

Statement (2): Sales in 2006-07 were Rs 4,300 crores.

- (A) Any one of the two statements (1) or (2) taken alone is enough to answer the question.
- (B) Each of the statements (1) or (2) taken alone is enough to answer the question.
- (C) Both statements together are enough to answer the question, but neither one alone is enough.
- (D) Both statements together are not enough to answer the question.

Correct Answer: (C) Both statements together are enough to answer the question, but neither one alone is enough.

SOLUTION:

Step 1: Set up the two years side by side.

Call last year's sales and profit s and p , and this year's sales and profit s_1 and p_1 . We know $p_1 = 1.32p$ (32% profit

growth) and Profit = Sales minus Expenses. We want $\frac{s_1 - s}{s} \times 100$.

Step 2: Try Statement (1) by itself.

Statement (1) hands us the expense numbers only: Rs 1,220 crore last year and Rs 1,400 crore this year. That gives $s = p + 1220$ and $s_1 = 1.32p + 1400$, which is 2 equations but 3 unknowns (s , s_1 , p). No unique sales growth number comes out. Not sufficient alone.

Step 3: Try Statement (2) by itself.

Statement (2) hands us this year's sales, $s_1 = 4300$, and nothing about expenses or profit values. There is no way to find s from this alone. Not sufficient alone.

Step 4: Merge the two statements.

Plug $s_1 = 4300$ into $s_1 = 1.32p + 1400$: $4300 = 1.32p + 1400$, so $1.32p = 2900$ and $p = 2900/1.32$. Rounding, $p \approx 2196.97$. Now use Statement (1)'s expense figure for last year: $s = p + 1220 \approx 3416.97$.

Step 5: Compute the growth rate.

$$\text{Growth} = \frac{4300 - 3416.97}{3416.97} \times 100 \approx 25.84\%$$

A single definite number comes out only once both statements are combined, so both are required together and neither is enough alone.

Both statements together are sufficient, neither alone is

Quick Tip: Set up Sales = Profit + Expenses for both years using $P' = 1.32P$, and see how many unknowns remain after each statement.

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106. Use the table below, which shows the speed of a train over a 3-hour period. The time count does not start from when the train began moving.

Time (minutes)	0	30	45	60	90	120	150	180
Speed (km/hour)	40	45	47.5	50	55	60	65	70

During the three-hour period shown in the table, the speed of the train increased by

- (A) 25%
- (B) 100%
- (C) 75%
- (D) 125%

Correct Answer: (C) 75%

SOLUTION:

Step 1: Compare the two speeds as a ratio.

Instead of computing the increase directly, look at how many times bigger the final speed is compared to the starting speed. Initial speed = 40 km/hour, final speed (at 180 minutes) = 70 km/hour.

$$\frac{\text{final}}{\text{initial}} = \frac{70}{40} = 1.75$$

Step 2: Convert the ratio to a percentage increase.

A ratio of 1.75 means the final speed is 175% of the initial speed. The increase over the original 100% is therefore $175\% - 100\% = 75\%$.

Step 3: Cross-check with the raw numbers.

The actual rise in speed is $70 - 40 = 30$ km/hour. As a fraction of the original 40 km/hour, that is $30/40 = 0.75$, which is again 75%. Both routes agree.

Step 4: Match to the options.

None of 25%, 100% or 125% equal 75%, so those are eliminated.

75%

Quick Tip: Percentage increase always uses the starting value (speed at time 0) as the base, not the ending value.

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107. Use the same train-speed table as above.

Time (minutes)	0	30	45	60	90	120	150	180
Speed (km/hour)	40	45	47.5	50	55	60	65	70

At time t (minutes) after the beginning, which formula fits the train's speed according to the table (assume the change is linear over time)?

- (A) $\frac{t}{6}$
(B) $6t$
(C) $40 + t$
(D) $40 + \frac{t}{6}$

Correct Answer: (D) $40 + \frac{t}{6}$

SOLUTION:

Step 1: Work out the rate of change per minute first.

Over the full 3-hour (180-minute) span, speed goes from 40 km/hour to 70 km/hour, a rise of 30 km/hour in 180 minutes. That is a rate of $30/180 = 1/6$ km/hour for every minute that passes.

Step 2: Write the speed as starting speed plus this rate times time.

$$v(t) = 40 + \frac{1}{6}t$$

This says the speed starts at 40 km/hour when $t = 0$ and climbs by $1/6$ km/hour for every minute.

Step 3: Test it on a value not used to build the formula.

Try $t = 120$: $40 + 120/6 = 40 + 20 = 60$, which matches the table's entry of 60 km/hour at 120 minutes. Try $t = 45$: $40 + 45/6 = 47.5$, which also matches.

Step 4: Eliminate options that fail the $t = 0$ check.

At $t = 0$, the actual speed is 40 km/hour. Options $t/6$ and $6t$ both give 0 at $t = 0$, so neither can be right. Option $40 + t$ gives 70 km/hour already at $t = 30$, far above the table's 45 km/hour, so it also fails.

Step 5: Final Answer.

Only $40 + \frac{t}{6}$ survives every check.

$40 + \frac{t}{6}$

Quick Tip: Use the speed at $t = 0$ as the starting value, then find the constant rate of change per minute from any other row in the table.

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108. Use the same train-speed table as above.

Time (minutes)	0	30	45	60	90	120	150	180
Speed (km/hour)	40	45	47.5	50	55	60	65	70

How fast was the train travelling $2\frac{1}{2}$ hours after the beginning of the time period?

- (A) 50 km/h
- (B) 55 km/h
- (C) 60 km/h
- (D) 65 km/h

Correct Answer: (D) 65 km/h

SOLUTION:

Step 1: Note what "2 and a half hours" means in minutes.

Half an hour is 30 minutes, so $2\frac{1}{2}$ hours is $2 \times 60 + 30 = 150$ minutes.

Step 2: Locate 150 minutes on the time axis of the table.

Scanning the top row of the table (0, 30, 45, 60, 90, 120, 150, 180), the value 150 appears directly as one of the

given time marks.

Step 3: Read the matching speed.

Directly below 150 minutes in the speed row, the table shows 65 km/hour.

Step 4: Sanity check with the rate of change.

From $t = 120$ (speed 60) to $t = 150$ (30 minutes later), the speed should rise by $30 \times \frac{1}{6} = 5$ km/hour, taking it from 60 to 65 km/hour. This matches the table exactly, confirming the reading is correct.

Step 5: Final Answer.

The other three options (50, 55, 60 km/hour) belong to earlier time marks (60, 90, and 120 minutes respectively), not to 150 minutes, so they are incorrect.

65 km/h

Quick Tip: Convert $2\frac{1}{2}$ hours to 150 minutes and read that column straight off the table.

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109. In March 2007, Computers Ltd. made a bundled offer of its laptops together with Deskjet printers to boost sales, though both products were also sold individually. What is the price of the printer, if bought separately? Decide whether the information given in the two statements below is enough to answer the question.

Statement (1): The bundled offer price was Rs 42,600.

Statement (2): The laptop, without the bundle offer, was priced at Rs 39,400.

- (A) Any one of the two statements (1) or (2) is enough to answer the question.
- (B) Each of the statements (1) or (2), taken alone, is enough to answer the question.
- (C) Both statements, taken together, are enough to answer the question, but neither one alone is enough.
- (D) Both statements together are not enough to answer the question.

Correct Answer: (D) Both statements together are not enough to answer the question.

SOLUTION:

Step 1: Count what is actually unknown.

There are two separate prices we might need, the laptop's price L and the printer's price Pr , plus a third hidden unknown: how much of a discount the bundle offer carries, call it d . A "bundled offer to boost sales" is worded exactly like a promotional discount, so d cannot be assumed to be zero just because the question is silent about it.

Step 2: See what each statement supplies.

Statement (1) supplies one number, the bundle price (42,600). Statement (2) supplies a second number, the laptop's standalone price (39,400). Together that is only 2 known numbers for 3 unknowns (L , Pr , d), and L becomes known from Statement (2), leaving 1 equation $42,600 = 39,400 + Pr - d$ for the 2 remaining unknowns Pr and d .

Step 3: Show two different discount values give two different printer prices.

If $d = 0$ (no discount at all), $Pr = 42,600 - 39,400 = 3,200$. But if $d = 500$ (a modest promotional discount), Pr

$= 3,200 + 500 = 3,700$. Both are consistent with the two statements, yet they give different printer prices. Since more than one value of P fits the given data, the printer's exact price cannot be pinned down.

Step 4: Final Answer.

Because the size of the bundle discount is never given, neither statement alone, nor both together, can fix a single value for the printer's price.

Both statements together are insufficient

Quick Tip: A bundle price is rarely just the sum of the individual prices; without knowing the discount, the two statements cannot isolate the printer's price.

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110. The following table gives data collected for an online job portal, InfiniteJobs.com. For each question in this set, there are two statements, X and Y, each of which could be True or False. Choose the option that correctly describes both statements.

Year	Category	Number of Registrations	Number of Candidates who posted their CVs	Number of Candidates short-listed by Employers	Number of offered jobs
2004	Technical	61,205	59,981	684	181
2004	Managerial	19,236	15,389	138	48
2005	Technical	63,298	60,133	637	115
2005	Managerial	45,292	40,763	399	84

Statement X: The percentage increase in the number of Registrations from 2004 to 2005 is higher for Managerial candidates than for Technical candidates.

Statement Y: The overall Registrations have grown by more than 25%.

- (A) Only [X] is True
- (B) Only [Y] is True
- (C) Both [X] and [Y] are True
- (D) Neither [X] nor [Y] is True

Correct Answer: (C) Both [X] and [Y] are True

SOLUTION:

Step 1: List what each statement is really asking.

X compares two growth rates (Managerial vs Technical registrations). Y checks whether the combined registration count crossed a 25% growth mark. These need two separate calculations.

Step 2: Work out Managerial growth as a multiplier.

2005 registrations divided by 2004 registrations for Managerial: $45,292/19,236 \approx 2.354$, which means Managerial registrations became about 2.35 times their old value, a rise of about 135%.

Step 3: Work out Technical growth as a multiplier.

For Technical: $63,298/61,205 \approx 1.0342$, a rise of only about 3.4%. Since 135% is clearly bigger than 3.4%, X holds up.

Step 4: Add up totals for Y and compare against the 25% mark.

Add both categories for each year: 2004 gives $61,205 + 19,236 = 80,441$, 2005 gives $63,298 + 45,292 = 108,590$. A 25% rise on 80,441 would mean reaching $80,441 \times 1.25 = 100,551.25$. The actual 2005 total, 108,590, is well past that mark, so the growth is more than 25% and Y is true.

Step 5: Final Answer.

Both claims survive the check, so the correct choice is that both X and Y are true.

Both [X] and [Y] are True

Quick Tip: Work out percentage change separately for Managerial and Technical registrations, then compare the combined 2004 and 2005 totals against a 25% benchmark.

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111. Use the same InfiniteJobs.com table as above.

Year	Category	Number of Registrations	Number of Candidates who posted their CVs	Number of Candidates short-listed by Employers	Number of offered jobs
2004	Technical	61,205	59,981	684	181
2004	Managerial	19,236	15,389	138	48
2005	Technical	63,298	60,133	637	115
2005	Managerial	45,292	40,763	399	84

Statement X: The percentage of drop-outs (from the Registration stage to posting CVs) had decreased from 2004 to 2005 for the Managerial category.

Statement Y: The percentage of drop-outs was higher for the Technical category than for the Managerial category in 2005.

- (A) Only [X] is True
- (B) Only [Y] is True
- (C) Both [X] and [Y] are True
- (D) Neither [X] nor [Y] is True

Correct Answer: (A) Only [X] is True

SOLUTION:

Step 1: Reframe drop-outs as a "conversion rate" instead.

Rather than working with the drop-out percentage directly, it helps to work with the opposite quantity, the CV-posting rate (CVs posted divided by Registrations), since a higher conversion rate means a lower drop-out rate, and

vice versa.

Step 2: Find the Managerial conversion rate for both years.

2004: $15,389/19,236 \approx 0.800$, so about 80% converted (20% dropped out). 2005: $40,763/45,292 \approx 0.900$, so about 90% converted (10% dropped out). Conversion rose from 80% to 90%, which means the drop-out rate fell from 20% to 10%. This confirms Statement X is true.

Step 3: Find the Technical conversion rate for 2005.

$60,133/63,298 \approx 0.950$, so about 95% of Technical registrants converted to CV-posters in 2005, meaning only about 5% dropped out.

Step 4: Compare the two 2005 drop-out rates.

Technical's drop-out rate (about 5%) is lower than Managerial's (about 10%) in 2005. Statement Y claims Technical's rate was higher, which is the opposite of what the numbers show, so Statement Y is false.

Step 5: Final Answer.

Only Statement X turns out to be correct.

Only [X] is True

Quick Tip: Drop-outs = Registrations minus CVs posted; convert to a percentage of Registrations before comparing across categories or years.

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112. Use the same InfiniteJobs.com table as above.

Year	Category	Number of Registrations	Number of Candidates who posted their CVs	Number of Candidates short-listed by Employers	Number of offered jobs
2004	Technical	61,205	59,981	684	181
2004	Managerial	19,236	15,389	138	48
2005	Technical	63,298	60,133	637	115
2005	Managerial	45,292	40,763	399	84

Statement X: The success rate of candidates getting short-listed based on their CVs is higher for the Managerial category than for the Technical category in 2005.

Statement Y: The success rate of candidates getting short-listed based on their CVs is better for the Managerial category in 2005 than in 2004.

- (A) Only [X] is True
- (B) Only [Y] is True
- (C) Both [X] and [Y] are True
- (D) Neither [X] nor [Y] is True

Correct Answer: (B) Only [Y] is True

SOLUTION:

Step 1: Convert each success rate to a "per thousand" figure to make the comparison easier to read.

Managerial 2005: 399 short-listed out of 40,763 CVs is about 9.8 per thousand. Technical 2005: 637 short-listed out of 60,133 CVs is about 10.6 per thousand.

Step 2: Compare the two 2005 figures for Statement X.

Technical's 10.6 per thousand beats Managerial's 9.8 per thousand, so Managerial is not the stronger category in 2005. Statement X, which claims Managerial is higher, is false.

Step 3: Find Managerial's 2004 figure for Statement Y.

Managerial 2004: 138 short-listed out of 15,389 CVs is about 9.0 per thousand.

Step 4: Compare Managerial's two years for Statement Y.

Managerial moved from about 9.0 per thousand in 2004 to about 9.8 per thousand in 2005, an improvement. So Statement Y, which claims 2005 was better than 2004 for Managerial, is true.

Step 5: Final Answer.

Statement Y alone is correct.

Only [Y] is True

Quick Tip: Success rate = (candidates short-listed) divided by (candidates who posted CVs); compute it separately for each year/category before comparing.

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113.

The table below gives data collected for an online job portal, InfiniteJobs.com, for the Technical and Managerial candidate categories in 2004 and 2005.

Year	Category	Registrations	CVs Posted	Shortlisted by Employers	Offered Jobs
2004	Technical	61,205	59,981	684	181
	Managerial	19,236	15,389	138	48
2005	Technical	63,298	60,133	637	115
	Managerial	45,292	40,763	399	84

Statement X: In 2004, the number of candidates offered jobs as a proportion of the number of CV's posted was higher for Technical than for Managerial candidates.

Statement Y: In 2004, among those short-listed by Employers, the Technical category had a higher success rate in securing jobs than the Managerial category.

- (A) Only [X] is True
- (B) Only [Y] is True
- (C) Both [X] and [Y] are True
- (D) Neither [X] nor [Y] is True

Correct Answer: (D) Neither [X] nor [Y] is True

SOLUTION:

Step 1: Understanding the Concept:

Both statements are comparisons of two fractions. Instead of converting each fraction to a decimal, we can compare $\frac{a}{b}$ and $\frac{c}{d}$ directly by cross multiplying, since $\frac{a}{b} > \frac{c}{d}$ exactly when $a \times d > c \times b$. This avoids any rounding error.

Step 2: Key Formula or Approach:

Apply cross multiplication once for the CV based ratio (Statement X) and once for the shortlist based ratio (Statement Y).

Step 3: Detailed Explanation.

For Statement X, compare Technical's $\frac{181}{59981}$ with Managerial's $\frac{48}{15389}$.

Cross multiply: $181 \times 15389 = 2785409$ and $48 \times 59981 = 2879088$.

Since $2879088 > 2785409$, the Managerial fraction is the larger one, so Technical's proportion is not higher and Statement X fails.

For Statement Y, compare Technical's $\frac{181}{684}$ with Managerial's $\frac{48}{138}$.

Cross multiply: $181 \times 138 = 24978$ and $48 \times 684 = 32832$.

Since $32832 > 24978$, Managerial again has the larger ratio, so Technical does not have the higher success rate either, and Statement Y fails.

Step 4: Final Answer:

Cross multiplication shows Managerial wins both comparisons, so neither X nor Y is correct.

Neither X nor Y is True

Quick Tip: Turn each statement into a ratio (offers over CV's, and offers over shortlisted) for both categories in 2004, then compare the two ratios directly instead of assuming which one should be bigger.

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114.

The following table gives cost data of select stock prices on 3rd Dec 2003 in two markets, BSE of India and NQE of Kya Kya island. Closing stock refers to the price at the close of trading hours and opening stock to the price at the beginning of the day. The currency of Kya Kya is # and the exchange rate is # = Rs 11.

Share	Market	Opening Price	Closing Price
SIFY	BSE (Rs)	232	247
INFY	NQE (#)	9.5	10.5
WIPRO	NQE (#)	5.5	6.5
TCS	NQE (#)	40.5	40

Which share and which market showed the highest % increase on 3rd Dec 2003?

- (A) SIFY on BSE
- (B) INFY on NQE
- (C) WIPRO on NQE
- (D) TCS on NQE

Correct Answer: (C) WIPRO on NQE

SOLUTION:

Instead of computing every percentage in full, we can rank the four combinations quickly by looking at the ratio of closing price to opening price. A bigger ratio means a bigger percentage gain, since **% increase = (ratio – 1) × 100**.

1. **SIFY on BSE:** ratio = $247/232 \approx 1.065$, a gain of about 6.5%.
2. **INFY on NQE:** ratio = $10.5/9.5 \approx 1.105$, a gain of about 10.5%.
3. **WIPRO on NQE:** ratio = $6.5/5.5 \approx 1.182$, a gain of about 18.2%, clearly bigger than the other two so far.
4. **TCS on NQE:** ratio = $40/40.5 \approx 0.988$, which is below 1, so this stock actually fell in price and cannot be the answer.

WIPRO's ratio of about 1.182 is the largest of the four, so it gives the biggest percentage jump from opening to closing.

Let's summarize:

- A closing-to-opening ratio above 1 means a gain, and the farther above 1, the bigger the percent gain.
- TCS's ratio fell below 1, ruling it out immediately without needing the exact percentage.

WIPRO on NQE shows the highest percentage increase on 3rd Dec 2003.

Quick Tip: Work out (Closing minus Opening) divided by Opening for each of the four given combinations; a ratio of Closing to Opening greater than 1 signals a rise, and the biggest ratio wins.

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115.

Arbitrage means buying a share in one market and selling it simultaneously in another market. The table gives the opening price of four shares on 3rd Dec 2003 in both BSE of India (Rs) and NQE of Kya Kya island (#), where # = Rs 11.

Share	BSE Opening (Rs)	NQE Opening (#)
SIFY	232	21
INFY	105	9.5
WIPRO	60	5.5
TCS	450	40.5

If Mr. Ghosh Babu buys a share at the *opening* price on one exchange and sells it at the *opening* price on the other exchange, on which share does he make maximum % profit? (Exchange rate: # = Rs 11)

- (A) SIFY
- (B) INFY
- (C) WIPRO
- (D) TCS

Correct Answer: (D) TCS

SOLUTION:

Arbitrage profit only exists because the same share trades at slightly different rupee prices on the two exchanges at the same moment. Once every NQE price is converted to rupees, the profit percentage is simply the size of the gap relative to the cheaper price. Convert first: SIFY NQE = $21 \times 11 = 231$, INFY NQE = $9.5 \times 11 = 104.5$, WIPRO NQE = $5.5 \times 11 = 60.5$, TCS NQE = $40.5 \times 11 = 445.5$.

1. **SIFY:** prices are Rs 231 (NQE) and Rs 232 (BSE), a gap of just Rs 1 on a base above 230, giving roughly 0.43% profit.
2. **INFY:** prices are Rs 104.5 (NQE) and Rs 105 (BSE), a gap of Rs 0.5 on a smaller base near 104.5, giving roughly 0.48% profit, slightly better than SIFY.
3. **WIPRO:** prices are Rs 60 (BSE) and Rs 60.5 (NQE), a gap of Rs 0.5 on a much smaller base of 60, giving roughly 0.83% profit, better still because the base is small.
4. **TCS:** prices are Rs 445.5 (NQE) and Rs 450 (BSE), a gap of Rs 4.5, which looks big in absolute terms but sits on a base of about 445.5, giving roughly 1.01% profit, the largest of all four.

The lesson here is that a bigger rupee gap does not automatically mean a bigger percentage profit; it depends on the size of the gap relative to its own base price. TCS wins because Rs 4.5 on a base near 445 outperforms the smaller absolute gaps on WIPRO and INFY once expressed as a percentage.

Let's summarize:

- Always convert to one currency before comparing prices across exchanges.
- Percentage profit depends on the gap relative to the buying price, not the absolute rupee gap.

TCS gives Mr. Ghosh Babu the highest percentage arbitrage profit.

Quick Tip: Convert every NQE opening price to rupees using the given rate, then for each share divide the price gap between the two markets by the lower (buying) price to get percentage profit.

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116.

Using the same 3rd December 2003 stock price data, SIFY's BSE opening price was Rs 232 and its BSE closing price was Rs 247.

In an M&A deal, SIFY is purchased by its parent company SATYAM, which purchases 15% of SIFY's equity shares. Total SIFY equity shares are 1 million. How much does Satyam pay in rupees for the stake if 50% of its purchases were on BSE's opening price and the balance on BSE's closing price?

- (A) 36 million
- (B) 3.5 million
- (C) 363 million
- (D) 217 million

Correct Answer: (A) 36 million

SOLUTION:

Step 1: Understanding the Concept:

Rather than computing the two halves separately and adding, we can use the average price paid per share, since the purchase is split exactly 50-50 between two prices.

Step 2: Key Formula or Approach:

When equal quantities are bought at two prices, the average price paid per unit is simply the arithmetic mean of the two prices.

$$\text{Average price} = \frac{\text{Opening} + \text{Closing}}{2}$$

Step 3: Detailed Explanation.

$$\text{Average price per share} = \frac{232 + 247}{2} = \frac{479}{2} = 239.5 \text{ rupees.}$$

$$\text{Number of shares purchased} = 15\% \times 1,000,000 = 150,000 \text{ shares.}$$

$$\text{Total payment} = 150,000 \times 239.5 = 35,925,000 \text{ rupees.}$$

Step 4: Final Answer:

This equals about 35.925 million rupees, which rounds to Rs 36 million, the same result reached by valuing the two halves separately.

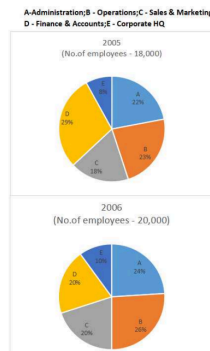
36 million

Quick Tip: Find the number of shares bought (15% of 1 million), split that into two equal halves, and value each half at its own BSE price before adding, or equivalently multiply the total shares by the average of the two prices.

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117.

The pie-charts below give the percentage distribution of employees in different Departments in XYZ Company Ltd. during the years 2005 and 2006. A - Administration; B - Operations; C - Sales & Marketing; D - Finance & Accounts; E - Corporate HQ.



2005 (total employees 18,000): A 22%, B 23%, C 18%, D 29%, E 8%.

2006 (total employees 20,000): A 24%, B 26%, C 20%, D 20%, E 10%.

If the average *monthly* salary of employees in Administration was Rs 12,000 in 2005, what was the approximate total salary expense of Administration in 2005?

- (A) Rs. 57 lakhs
- (B) Rs. 4.7 crores
- (C) Rs. 66 crores
- (D) Rs. 66 lakhs

Correct Answer: (B) Rs. 4.7 crores

SOLUTION:

Step 1: Understanding the Concept:

Instead of finding the full headcount first, we can work out the monthly wage bill contributed by each 1% of the 2005 workforce, and then scale that up to 22%.

Step 2: Key Formula or Approach:

1% of the 2005 workforce corresponds to $\frac{18000}{100} = 180$ employees, and their combined monthly salary at Rs 12,000 each is a fixed "per percentage point" amount that can simply be multiplied by 22.

Step 3: Detailed Explanation.

Employees per 1% = 180.

Monthly salary cost per 1% = $180 \times 12,000 = 21,60,000$ rupees, that is Rs 21.6 lakh for every percentage point of the workforce.

Administration is 22% of the company, so its monthly salary cost = $22 \times 21.6 \text{ lakh} = 475.2 \text{ lakh}$.

Step 4: Final Answer:

Rs 475.2 lakh is the same as Rs 4.752 crore, which rounds to about Rs 4.7 crore, matching the direct calculation.

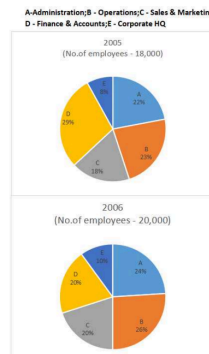
Rs. 4.7 crores

Quick Tip: First convert Administration's 22% share of the 2005 workforce into an actual employee count, then multiply that count by the Rs 12,000 monthly salary to get the total monthly wage bill.

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118.

The pie-charts below give the percentage distribution of employees in different Departments in XYZ Company Ltd. during the years 2005 and 2006. A - Administration; B - Operations; C - Sales & Marketing; D - Finance & Accounts; E - Corporate HQ.



2005 (total employees 18,000): A 22%, B 23%, C 18%, D 29%, E 8%.

2006 (total employees 20,000): A 24%, B 26%, C 20%, D 20%, E 10%.

What is the percentage increase in the number of employees in Sales & Marketing from 2005 to 2006?

- (A) 2%
- (B) 2.34%
- (C) 23.45%
- (D) None of these

Correct Answer: (C) 23.45%

SOLUTION:

Step 1: Understanding the Concept:

Instead of subtracting headcounts and then dividing, we can find the ratio of the two headcounts directly, since
 $\% \text{ increase} = (\text{ratio} - 1) \times 100$.

Step 2: Key Formula or Approach:

$$\text{Ratio of 2006 headcount to 2005 headcount} = \frac{0.20 \times 20000}{0.18 \times 18000}.$$

Step 3: Detailed Explanation.

$$\text{Numerator} = 0.20 \times 20000 = 4000.$$

$$\text{Denominator} = 0.18 \times 18000 = 3240.$$

$$\text{Ratio} = \frac{4000}{3240} \approx 1.2346.$$

Since the ratio is 1.2346, the headcount grew to about 123.46% of its old value, which is a 23.46% rise.

Step 4: Final Answer:

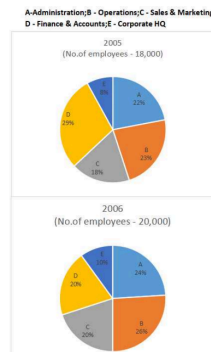
This matches the direct subtraction method and rounds to 23.45%.

23.45%

Quick Tip: Convert the 18% (2005) and 20% (2006) shares into actual employee counts using each year's own total, then apply the standard percentage-increase formula on those two counts.

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119.
The pie-charts below give the percentage distribution of employees in different Departments in XYZ Company Ltd. during the years 2005 and 2006. A - Administration; B - Operations; C - Sales & Marketing; D - Finance & Accounts; E - Corporate HQ.



2005 (total employees 18,000): A 22%, B 23%, C 18%, D 29%, E 8%.

2006 (total employees 20,000): A 24%, B 26%, C 20%, D 20%, E 10%.

In which department is the variation in strength (absolute change) the maximum in 2006 compared to 2005?

- (A) A (Administration)
- (B) B (Operations)
- (C) D (Finance & Accounts)
- (D) E (Corporate HQ)

Correct Answer: (C) D (Finance & Accounts)

SOLUTION:

Rather than compute both years' headcounts and subtract, split each department's change into two parts: the change that comes purely from the company growing by 2,000 employees, and the change that comes from the department's own share shifting. Using new% for the 2006 share and old% for the 2005 share, and old total = 18,000:

$$\Delta = (\text{new\%} \times 2000) + (\text{new\%} - \text{old\%}) \times 18000$$

1. **A (Administration):** $(0.24 \times 2000) + (0.24 - 0.22) \times 18000 = 480 + 360 = 840$.
2. **B (Operations):** $(0.26 \times 2000) + (0.26 - 0.23) \times 18000 = 520 + 540 = 1060$.
3. **D (Finance & Accounts):** $(0.20 \times 2000) + (0.20 - 0.29) \times 18000 = 400 - 1620 = -1220$, an absolute change of 1220. The department's share actually dropped by 9 percentage points, which pulls its headcount down hard even though the company as a whole grew.
4. **E (Corporate HQ):** $(0.10 \times 2000) + (0.10 - 0.08) \times 18000 = 200 + 360 = 560$.

The magnitudes are 840, 1060, 1220 and 560. Finance & Accounts shows the biggest swing because it lost 9 percentage points of the company's headcount while the company itself was expanding, so both effects push in the same direction and add up.

Let's summarize:

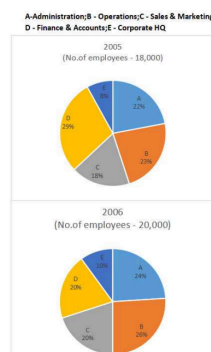
- A department's absolute headcount change depends on both the overall company growth and its own share change, and the two can reinforce or cancel each other.
- D's share fell sharply even as the company grew, giving it the largest net drop.

Finance & Accounts (D) has the maximum absolute change in strength.

Quick Tip: Convert every department's percentage share into an actual headcount for 2005 and 2006 using that year's own total, then take the absolute difference for each department and compare, remembering a department can drop even while the company grows.

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120.
The pie-charts below give the percentage distribution of employees in different Departments in XYZ Company Ltd. during the years 2005 and 2006. A - Administration; B - Operations; C - Sales & Marketing; D - Finance & Accounts; E - Corporate HQ.



2005 (total employees 18,000): A 22%, B 23%, C 18%, D 29%, E 8%.

2006 (total employees 20,000): A 24%, B 26%, C 20%, D 20%, E 10%.

If 300 employees left Operations at the end of 2005, how many joined in 2006?

- (A) 480
(B) 960
(C) 1360
(D) None of these

Correct Answer: (C) 1360

SOLUTION:

Think of this as a flow of people rather than a formula. Operations had 4,140 employees at the start of 2005 (from $23\% \times 18000$). At the end of 2005, 300 of them left, so only $4140 - 300 = 3840$ of the original group carried over into 2006 as "surviving" staff.

1. By the end of 2006, Operations has $26\% \times 20000 = 5200$ employees, from the pie chart.

2. Of these 5200, only 3840 are people who were already there and stayed on; everyone else must be a fresh joiner during 2006.
3. Number of fresh joiners = $5200 - 3840 = 1360$.

This "who is still around" way of thinking gives the same figure as adding the net increase to the number who left, because 1,060 (net increase) plus 300 (attrition) is exactly 1,360.

Let's summarize:

- Track people as a running total: start, minus leavers, plus joiners, equals end.
- A net increase in headcount can hide a much larger number of new joiners if there was also attrition to make up for.

1,360 employees joined the Operations department in 2006.

Quick Tip: Work out Operations' headcount for 2005 and 2006 from the pie charts, subtract to get the net change, then add back the 300 who left since new joiners must cover both the net growth and the departures.

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121.

You have three chests in front of you. The first chest is labeled "GOLD", the second is labeled "SILVER" and the third is labeled "GOLD OR SILVER". You have been told that all the labels are on the wrong chests and that one chest contains gold coins, one contains silver coins and one contains bronze coins. How many chests do you need to open to deduce which label goes on which chest?

- (A) 0
(B) 1
(C) 2
(D) Cannot deduce

Correct Answer: (A) 0

SOLUTION:

Step 1: List what each wrong label forbids.

Label on chest 1 is "GOLD", so chest 1 $\neq$ gold.

Label on chest 2 is "SILVER", so chest 2 $\neq$ silver.

Label on chest 3 is "GOLD OR SILVER", so chest 3 $\neq$ gold and chest 3 $\neq$ silver.

Step 2: Narrow chest 3 first, since it has two restrictions.

Chest 3 cannot be gold and cannot be silver, and the only three possible contents are gold, silver and bronze. That leaves exactly one option for chest 3: bronze.

Step 3: Fill in the rest by elimination.

Bronze is now used up by chest 3, so chest 1 and chest 2 must split gold and silver between them.

Chest 1 cannot be gold, so chest 1 must be silver, which leaves chest 2 as gold, and this also agrees with chest 2's own restriction, since chest 2 $\neq$ silver, and gold fits fine.

Step 4: Check the whole assignment is self-consistent.

Chest 1 = silver (label said gold, wrong, correct), chest 2 = gold (label said silver, wrong, correct), chest 3 = bronze (label said gold or silver, wrong, correct). Every condition of the puzzle checks out with no contradiction, and this is the only assignment that works.

Final Answer:

Since one unique solution falls out just from the fact that all three labels are wrong, no chest needs to be physically opened.

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Quick Tip: Start with the chest labeled "GOLD OR SILVER". Since every label is wrong, this chest cannot hold gold or silver, so its true content is forced without opening anything.

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122.

How many minutes before 12 noon is it when it is 27 minutes past 10 am?

- (A) 30
- (B) 93
- (C) 49
- (D) 94

Correct Answer: (B) 93

SOLUTION:

Step 1: Convert both times to minutes counted from midnight.

10:27 am is 10 hours and 27 minutes after midnight, which is $10 \times 60 + 27 = 627$ minutes.

12:00 noon is 12 hours after midnight, which is $12 \times 60 = 720$ minutes.

Step 2: Subtract to get the gap between the two times.

$720 - 627 = 93$ minutes.

Step 3: Interpret the result.

Since noon comes after 10:27 am, this 93 minute gap is exactly how many minutes remain before noon is reached.

Final Answer:

The time 10:27 am is 93 minutes before 12 noon.

93

Quick Tip: Find the total minutes from 10:27 am to 12:00 noon by adding the minutes to 11:27 am and then the minutes from 11:27 am to noon.

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123.

Read the following passage and answer the questions based on it.

An employee has been assigned the task of allotting offices to six of the staff members. The offices are numbered 1 to 6. The offices are arranged in a row and they are separated from each other by six foot high dividers. Hence voices, sounds and cigarette smoke flow easily from one office to another.

Miss Ruby needs to use the telephone quite often throughout the day. Mr. Minhas and Mr. Brar need adjacent offices as they need to consult each other often while working. Miss Harsha is a senior employee and has to be allotted office number 5, having the biggest window. Mr. Dongre requires silence in the offices next to his. Mr. Tanjore, Mr. Minhas and Mr. Dongre are all smokers. Miss Harsha finds tobacco smoke allergic and consequently the offices next to hers are to be occupied by non-smokers. Unless specifically stated, all the employees maintain an atmosphere of silence during office hours.

The ideal candidate to occupy the office furthest from Mr. Brar would be:

- (A) Miss Harsha
- (B) Mr. Minhas
- (C) Mr. Tanjore
- (D) Mr. Dongre

Correct Answer: (D) Mr. Dongre

SOLUTION:

Step 1: Set up a 1 to 6 line and drop in the fixed person.

Draw six slots for offices 1 through 6. Miss Harsha goes straight into slot 5, since the passage gives her that office directly.

Step 2: Mark which slots must be non-smoking.

Because Miss Harsha reacts badly to smoke, slots 4 and 6, being right next to slot 5, are marked "non-smoker only". The smokers in this problem are Tanjore, Minhas and Dongre, so none of them can go in slot 4 or slot 6. That leaves Ruby and Brar as the only candidates for those two slots.

Step 3: Test both ways of placing Ruby and Brar.

Try Brar in slot 6: for Minhas to sit next to Brar, Minhas would need slot 5 or slot 7. Slot 5 is Harsha's and slot 7 does not exist, so this attempt fails.

Try Brar in slot 4 instead: now Minhas can take slot 3 or slot 5 to be adjacent; slot 5 is taken, so Minhas takes slot 3. This works, and it forces Ruby into slot 6.

Step 4: Drop the last two smokers into the last two slots.

Only slots 1 and 2 remain, for Dongre and Tanjore. Since Dongre needs quiet next to him and slots 3 to 4 are where Minhas and Brar will be talking often, giving Dongre the end slot 1 keeps him furthest from that noise. Tanjore takes slot 2.

Final row: Dongre, Tanjore, Minhas, Brar, Harsha, Ruby in slots 1 to 6.

Step 5: Measure distances from Brar's slot.

Brar is in slot 4. Counting slots away: slot 1 is 3 steps away, slot 6 is 2 steps away, and every other slot is closer still. Slot 1 wins as the furthest, and slot 1 belongs to Dongre.

Final Answer:

Mr. Dongre is the person best suited to the office farthest from Mr. Brar.

Mr. Dongre

Quick Tip: First fix Miss Harsha in office 5, then use the smoke-allergy rule to force the non-smokers into offices 4 and 6, and the Minhas-Brar adjacency rule to place the rest.

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124.

Read the following passage and answer the questions based on it.

An employee has been assigned the task of allotting offices to six of the staff members. The offices are numbered 1 to 6. The offices are arranged in a row and they are separated from each other by six foot high dividers. Hence voices, sounds and cigarette smoke flow easily from one office to another.

Miss Ruby needs to use the telephone quite often throughout the day. Mr. Minhas and Mr. Brar need adjacent offices as they need to consult each other often while working. Miss Harsha is a senior employee and has to be allotted office number 5, having the biggest window. Mr. Dongre requires silence in the offices next to his. Mr. Tanjore, Mr. Minhas and Mr. Dongre are all smokers. Miss Harsha finds tobacco smoke allergic and consequently the offices next to hers are to be occupied by non-smokers. Unless specifically stated, all the employees maintain an atmosphere of silence during office hours.

The three employees who are smokers should be seated in the offices:

- (A) 1, 2 and 4
- (B) 2, 3 and 6
- (C) 1, 2 and 6
- (D) 1, 2 and 3

Correct Answer: (D) 1, 2 and 3

SOLUTION:

Step 1: List the smokers and non-smokers separately.

Smokers: Tanjore, Minhas, Dongre. Non-smokers: Ruby, Brar, Harsha. There are six offices and six people, three in each group.

Step 2: Pin down the non-smokers' offices first.

Harsha is fixed at office 5. Since her neighbours (4 and 6) must be non-smokers, and only Ruby and Brar are left in that group, they take offices 4 and 6 between them. Testing shows Brar must take 4 (so that Minhas can sit next to him in office 3), which pushes Ruby into office 6.

So the three non-smoker offices are 4, 5 and 6, occupied by Brar, Harsha and Ruby respectively.

Step 3: The smoker offices are simply what is left over.

Since offices 4, 5 and 6 belong to non-smokers, offices 1, 2 and 3 must belong to the three smokers: Dongre, Tanjore and Minhas, with Minhas confirmed in office 3 and Dongre and Tanjore filling 1 and 2.

Step 4: Confirm with the full seating.

1 = Dongre, 2 = Tanjore, 3 = Minhas, 4 = Brar, 5 = Harsha, 6 = Ruby. Offices 1, 2 and 3 are indeed all smokers, and offices 4, 5, 6 are all non-smokers, matching the smoke-allergy rule perfectly.

Final Answer:

The smokers sit in offices 1, 2 and 3.

1, 2, 3

Quick Tip: Use the same seating worked out for the office allotment passage: Dongre, Tanjore and Minhas are the smokers, so note which office numbers they land in.

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125.

Read the following passage and answer the questions based on it.

An employee has been assigned the task of allotting offices to six of the staff members. The offices are numbered 1 to 6. The offices are arranged in a row and they are separated from each other by six foot high dividers. Hence voices, sounds and cigarette smoke flow easily from one office to another.

Miss Ruby needs to use the telephone quite often throughout the day. Mr. Minhas and Mr. Brar need adjacent offices as they need to consult each other often while working. Miss Harsha is a senior employee and has to be allotted office number 5, having the biggest window. Mr. Dongre requires silence in the offices next to his. Mr. Tanjore, Mr. Minhas and Mr. Dongre are all smokers. Miss Harsha finds tobacco smoke allergic and consequently the offices next to hers are to be occupied by non-smokers. Unless specifically stated, all the employees maintain an atmosphere of silence during office hours.

In the event of what occurrence, within a month of the assignment of the offices, would a request for a change in office be put forth by one or more employees?

- (A) Mr. Dongre quitting smoking
- (B) The installation of a noisy teletype machine by Miss Harsha in her office
- (C) Miss Ruby needs silence in the office(s) next to her own
- (D) Mr. Tanjore taking over the duties formerly taken care of by Miss Ruby

Correct Answer: (D) Mr. Tanjore taking over the duties formerly taken care of by Miss Ruby

SOLUTION:

The trick in this kind of question is to first work out exactly which office each rule is protecting, then test each proposed change against that specific office, not against the whole floor.

With the seating fixed as 1 = Dongre, 2 = Tanjore, 3 = Minhas, 4 = Brar, 5 = Harsha, 6 = Ruby, the only "protected" office in the whole layout is office 2. It is protected because office 1 is an end office with a single neighbour, and that neighbour is office 2, so Dongre's silence rule lands squarely on whoever sits there, which is Tanjore.

1. **Mr. Dongre quitting smoking:** this only touches the smoking rule tied to Miss Harsha's allergy, and Dongre was never seated next to Harsha, so nothing about this changes anyone's situation.
2. **A noisy teletype machine in Miss Harsha's office:** her neighbours, Brar and Ruby, have no silence requirement written for them, and Ruby is already a source of noise herself, so this passes without conflict.

3. **Miss Ruby needing silence next to her:** her only neighbour is Harsha, who is already silent by the default office rule, so this new need is met automatically.
4. **Mr. Tanjore taking over Miss Ruby's frequent phone calls:** Tanjore sits in office 2, the one office that Dongre's rule specifically requires to stay quiet. Making Tanjore noisy here breaks that rule directly.

Only the fourth scenario lands on the one protected office in the whole arrangement, so it is the one guaranteed to cause a complaint and a request for reassignment.

Let's summarize:

- Office 2 is the single spot in this layout that must stay quiet, because it sits next to Mr. Dongre.
- Any change that keeps office 2 quiet, or affects offices with no stated silence requirement, causes no conflict.
- Making Tanjore, in office 2, a frequent phone user is the only change that breaks an existing rule.

So the change that would prompt a request for a different office is Mr. Tanjore taking over Miss Ruby's duties.

Quick Tip: Work out which single office is protected by Mr. Dongre's silence rule, then check which of the four scenarios breaks silence in that exact office.

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126.

Shankar and Jwala are both members of a Youth club, though they are not speaking to each other and refuse to work with each other. Chaya, the club president, is appointing members to the fundraising committee, but she has resolved that she will not appoint anyone without his or her explicit consent. Shankar says, "I will not consent unless I know whether Jwala is to be a member." Jwala says, "I will not consent unless I know whether Shankar is to be a member." If all three stick to these resolutions, then:

- (A) Neither of them can be appointed to the committee.
- (B) They must either both be appointed or both left out.
- (C) The committee may have one of them, both of them, or neither.
- (D) Either one can be appointed, but not both.

Correct Answer: (D) Either one can be appointed, but not both.

SOLUTION:

Step 1: Set up two yes/no facts to track.

Let S = "Shankar is appointed" and J = "Jwala is appointed". There are four possible combinations of S and J : both true, both false, or exactly one true.

Step 2: Check the case $S = \text{true}$ and $J = \text{true}$.

Shankar's consent needs J 's value to be already known. Jwala's consent needs S 's value to be already known. Since both are being decided together, neither value can be "already known" before the other is settled, so this case can never actually be reached through the resolutions given. It is logically blocked.

Step 3: Check the case $S = \text{true}$ and $J = \text{false}$.

Jwala is simply not chosen, so her own consent is never needed. Shankar is told J is false, satisfying his condition, so he consents, and Chaya can appoint him. This case works cleanly.

Step 4: Check the case $S = \text{false}$ and $J = \text{true}$.

By the same logic with the roles swapped, this case also works cleanly: Shankar is left out, Jwala is told S is false, she consents, and she is appointed.

Step 5: Check the case $S = \text{false}$ and $J = \text{false}$.

Neither needs to consent to anything, since neither is being appointed, so there is no contradiction, but this is a trivial case, not a forced outcome.

Step 6: Combine the results.

Out of the two non-trivial live scenarios, exactly one of S, J is true and the other is false. The both-true case is impossible, so the two of them can never serve together, only separately.

Final Answer:

Either Shankar or Jwala can be appointed on his or her own, but the two of them can never both be on the committee at the same time.

Either one, but never both

Quick Tip: Check whether both being appointed together creates a circular problem where each person's consent depends on the other's status being decided first, then check what happens if only one of them is appointed.

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127.

A bank customer had Rs. 100 in his account. He then made 6 withdrawals, totaling Rs. 100. He kept a record of these withdrawals, and the balance remaining in the account, as follows:

Withdrawals Balance left

Rs. 50	Rs. 50
Rs. 25	Rs. 25
Rs. 10	Rs. 15
Rs. 8	Rs. 7
Rs. 5	Rs. 2
Rs. 2	Rs. 0
Rs. 100	Rs. 99

So, why are the totals not exactly right?

- (A) There is a mistake in the total of withdrawals.
- (B) There is a mistake in the total of the balance.
- (C) The two totals need not be equal.
- (D) The bank has cheated the customer.

Correct Answer: (C) The two totals need not be equal.

SOLUTION:

Step 1: Try a simple made-up example to expose the trick.

Suppose someone starts with Rs. 100 and withdraws Rs. 1 at a time, one hundred times. The withdrawals column would then add up to exactly $100 \times 1 = 100$, matching the starting balance.

Step 2: Add up the balance column for that same example.

The balance after each withdrawal runs 99, 98, 97, ..., 1, 0. Adding all of these gives $99 + 98 + \dots + 1 + 0 = \frac{99 \times 100}{2} = 4950$.

Step 3: Compare the two totals.

The withdrawals add to 100, while the balances add to 4950, a huge gap. Nobody would call this a mistake or an act of cheating; it simply shows that these two columns were never meant to add up to the same number.

Step 4: Apply the same idea back to the original problem.

In the original table, the withdrawals genuinely sum to Rs. 100. The balance column sums to Rs. 99, which is close only because there happen to be just six withdrawals of these particular sizes, not because of any accounting error.

Final Answer:

Since a running balance and a set of withdrawals are fundamentally different kinds of numbers, there is no requirement that their totals match, so the two totals need not be equal.

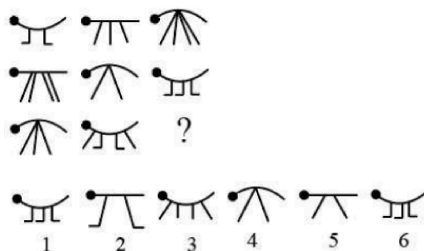
The two totals need not be equal.

Quick Tip: Check whether the "balance left" column is even supposed to add up to anything meaningful in the first place, since each balance already includes every earlier withdrawal.

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128.

Which image from the bottom row should replace the question mark?



- (A) 3
- (B) 6
- (C) 2
- (D) 5

Correct Answer: (D) 5

SOLUTION:

Step 1: Build a small table of the two features for every filled cell.

Row 1: (dip, bent legs), (flat, tripod legs), (dome, fan legs).

Row 2: (flat, fan legs), (dome, tripod legs), (dip, bent legs).

Row 3: (dome, fan legs), (dip, bent legs), (?, ?).

Step 2: Use the row rule to find the missing body shape.

Every row must contain one flat body, one dome body and one dip body, since that is the pattern set by rows 1 and 2. Row 3 already has dome and dip, so the missing body shape for row 3 must be flat.

Step 3: Use the row rule to find the missing leg style.

Every row must also contain one fan-leg figure, one bent-leg figure and one tripod-leg figure. Row 3 already has fan legs and bent legs, so the missing leg style is the plain tripod.

Step 4: Cross-check using the columns instead of the rows.

Column 3 currently holds dome-plus-fan-legs and dip-plus-bent-legs. Column 3 is missing a flat body and tripod legs too, exactly the same two features found from the row check. Since both checks agree, the answer is confirmed rather than a coincidence.

Step 5: Pick the option that matches flat body and tripod legs.

Scanning the six numbered options, image 5 is the one with a flat, straight body line and three evenly spread straight legs. The other options either have the wrong body curve, the wrong leg style, or both.

Final Answer:

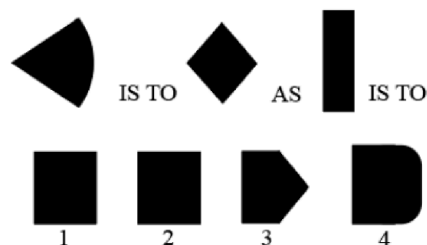
Both the row check and the column check point to the same combination, flat body with tripod legs, which is image 5.

5

Quick Tip: Look separately at the shape of the back/body line (flat, domed, or dipped) and the style of the legs (bent feet, a plain tripod, or a wide fan of straight rays). Each of the three types appears exactly once in every row and every column.

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129. A wedge shape is to a diamond shape as a vertical bar is to which of the given figures?



- (A) 1
- (B) 2
- (C) 3
- (D) 4

Correct Answer: (C) 3

SOLUTION:

Step 1: Count edges and points instead of just looking at shape.

The wedge has 3 sides: two straight sides that meet at a sharp point on the left, and one curved side on the right joining the ends of those two straight sides.

Step 2: Count edges and points on the diamond.

The diamond has 4 straight sides and 4 sharp points, left, right, top and bottom. Compared to the wedge, one curved side has been split into two straight sides that meet at a brand new point on the right. Nothing about the left point changed.

So the rule, stated in terms of edges, is: take the one non straight edge farthest from the existing point, and split it into two straight edges that meet at a new point.

Step 3: Apply this edge splitting rule to the bar.

The bar has 4 straight edges: left, top, right and bottom, and none of its corners stick out as a sharp point, since all four corners are plain 90 degree corners.

Splitting its right edge into two edges meeting at a new point gives a five sided figure: left edge unchanged, top and bottom edges shortened, and a new point sticking out on the right.

Step 4: Confirm against the answer choices.

That five sided, arrow like figure is exactly option 3. Option 4 instead replaces the straight right edge with a curve, which adds curvature instead of removing it, the reverse of what the first pair actually shows. Options 1 and 2 leave the rectangle completely unchanged, so they cannot complete an analogy that clearly changes the shape.

Final Answer:

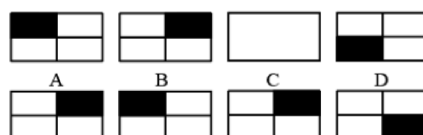
Option 3, the pointed pentagon shape, correctly completes the analogy.

Option 3

Quick Tip: Look at what happens to the curved edge of the wedge when it becomes a diamond, it turns into a sharp point. Apply the same change to the flat right edge of the bar.

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130. Which pattern from the bottom line (A, B, C, D or E) is missing from the top line?



- (A) A
- (B) B
- (C) D
- (D) E

Correct Answer: (C) D

SOLUTION:

Step 1: Label each small square by position.

Call the four small squares in every box TL for top left, TR for top right, BL for bottom left and BR for bottom right, based on where the shaded square sits inside the 2 by 2 grid.

Step 2: Write the top line as a set of codes.

Top line, left to right: TL, TR, none, BL. So the shaded positions used in the top line are TL, TR and BL, plus one box with no shading at all.

Step 3: Write the bottom line as a set of codes.

Bottom line: A equals TR, B equals TL, C equals TR, D equals BR. So the bottom line uses the positions TR, TL, TR and BR.

Step 4: Find the position used in the bottom line but not in the top line.

TR appears in the top line at box 2 and TL appears in the top line at box 1, so options A, B and C are all accounted for, since C simply repeats the same TR code as A.

BR never shows up anywhere among the top line's four boxes. Only option D uses the BR position.

Final Answer:

Since BR is the one shaded position never used in the top line, pattern D is the missing one.

Pattern D

Quick Tip: Note which quadrant, top left, top right, bottom left or bottom right, is shaded in each top line box, then check which bottom line box uses a quadrant never seen in the top line.

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131. During their school Silver Jubilee Reunion, four alumni were discussing their starting annual salaries back in 1981. The salaries in question were Rupees 40, 50, 60 and 70 thousand per year. Of course, the present MD of a private company earned the most. Arvind earned more than Biswajeet, and the doctor earned more than Dhruv the engineer. Chinmay could not remember what he started on. Biswajeet the lawyer did not start on Rs. 50,000, nor did Dhruv.

What is Chinmay's current profession?

- (A) MD
- (B) Lawyer
- (C) Doctor
- (D) Engineer

Correct Answer: (C) Doctor

SOLUTION:

Step 1: Start from the salary values instead of the people.

The four salaries are 40, 50, 60, 70 in thousands of rupees. The MD earns the most, so MD equals 70.

Biswajeet is the lawyer and never took 50, Dhruv is the engineer and also never took 50. Since the MD's salary is already fixed at 70, the value 50 has to belong to the fourth role, the Doctor. So Doctor equals 50.

Step 2: Fill in the remaining two salaries, 40 and 60.

These two values are left for the Lawyer, Biswajeet, and the Engineer, Dhruv. The clue that the Doctor earned more than Dhruv means Dhruv is less than 50, so Dhruv equals 40 and Biswajeet equals 60.

At this point the salary to role map is complete: MD equals 70, Lawyer equals 60, Doctor equals 50, Engineer equals 40.

Step 3: Assign Arvind and Chinmay to MD and Doctor using the last clue.

Only Arvind and Chinmay are left unplaced, and only MD and Doctor are left as roles for them. Testing both: if Arvind is the Doctor, Arvind's salary is 50, but Biswajeet's salary is 60, so Arvind would not have earned more than Biswajeet, which breaks the clue, so this is rejected.

If Arvind is the MD, Arvind's salary is 70, which is indeed more than Biswajeet's 60. This fits every clue, so Arvind is the MD, and by elimination Chinmay is the Doctor.

Step 4: State the completed table.

Arvind, MD, 70. Biswajeet, Lawyer, 60. Chinmay, Doctor, 50. Dhruv, Engineer, 40. Every original clue checks out against this table.

Final Answer:

Chinmay works as the Doctor.

Doctor

Quick Tip: Biswajeet is the lawyer and Dhruv is the engineer, so MD and Doctor belong to Arvind and Chinmay. Use the no one took Rs 50,000 except the Doctor clue to work out who earns what.

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132. During their school Silver Jubilee Reunion, four alumni were discussing their starting annual salaries back in 1981. The salaries in question were Rupees 40, 50, 60 and 70 thousand per year. Of course, the present MD of a private company earned the most. Arvind earned more than Biswajeet, and the doctor earned more than Dhruv the engineer. Chinmay could not remember what he started on. Biswajeet the lawyer did not start on Rs. 50,000, nor did Dhruv.

What was the Lawyer's starting salary?

- (A) Rs. 40,000
- (B) Rs. 50,000
- (C) Rs. 60,000
- (D) Rs. 70,000

Correct Answer: (C) Rs. 60,000

SOLUTION:

This puzzle gives four people, four professions and four salaries, and asks specifically for the lawyer's starting pay. Since Biswajeet is named as the lawyer, the real target is Biswajeet's salary.

1. **Rs 40,000:** this is the lowest figure. It turns out to belong to Dhruv, the engineer, once the Doctor is shown to earn more than him and takes Rs 50,000, leaving Rs 40,000 and Rs 60,000 for Dhruv and Biswajeet. Dhruv, being lower than the Doctor's Rs 50,000, must take Rs 40,000, not Biswajeet.
2. **Rs 50,000:** Biswajeet is directly ruled out from this value, since the clue states he did not start on Rs 50,000. This amount instead belongs to the Doctor, Chinmay.
3. **Rs 60,000:** with Rs 40,000 going to Dhruv and Rs 50,000 going to the Doctor, and Rs 70,000 reserved for the MD, Arvind, since Arvind must out earn Biswajeet, the only value left for Biswajeet is Rs 60,000.
4. **Rs 70,000:** this is the MD's salary, the highest of the four, and belongs to Arvind, not Biswajeet.

Working through the four salary values by elimination leaves exactly one figure open for Biswajeet, Rs 60,000. This also satisfies Arvind earned more than Biswajeet, since Arvind's Rs 70,000 exceeds it.

Let's summarize:

- The Doctor, Chinmay, takes the Rs 50,000 that Biswajeet and Dhruv were both barred from.
- Dhruv, the engineer, must earn less than the Doctor, fixing him at Rs 40,000.
- Arvind, the MD, takes the top salary of Rs 70,000, satisfying Arvind earned more than Biswajeet.
- Biswajeet is left with the remaining figure, Rs 60,000.

So the lawyer, Biswajeet, started on Rs 60,000.

Quick Tip: Work out the Doctor's salary first from the not Rs 50,000 clues, then use Doctor earned more than Dhruv and Arvind earned more than Biswajeet to place the rest.

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133. During their school Silver Jubilee Reunion, four alumni were discussing their starting annual salaries back in 1981. The salaries in question were Rupees 40, 50, 60 and 70 thousand per year. Of course, the present MD of a private company earned the most. Arvind earned more than Biswajeet, and the doctor earned more than Dhruv the engineer. Chinmay could not remember what he started on. Biswajeet the lawyer did not start on Rs. 50,000, nor did Dhruv.

Who received the highest starting salary?

- (A) Arvind
- (B) Biswajeet
- (C) Chinmay
- (D) Dhruv

Correct Answer: (A) Arvind

SOLUTION:

Step 1: Build an inequality chain from the clues.

Arvind earned more than Biswajeet gives Arvind greater than Biswajeet.

The Doctor earned more than Dhruv gives Doctor greater than Dhruv.

The MD earned the most gives MD greater than everyone else.

Step 2: Place Biswajeet and Dhruv using the not Rs 50,000 clues.

Since Biswajeet, the lawyer, and Dhruv, the engineer, both avoid Rs 50,000, and the MD already owns the top

value Rs 70,000, the value Rs 50,000 has to fall on the Doctor. That leaves only Rs 40,000 and Rs 60,000 for Biswajeet and Dhruv.

Because the Doctor on Rs 50,000 earned more than Dhruv, Dhruv cannot be Rs 60,000, since that would make him earn more than the Rs 50,000 Doctor, so Dhruv equals Rs 40,000 and Biswajeet equals Rs 60,000.

Step 3: Use Arvind greater than Biswajeet to finish the chain.

Arvind must earn more than Biswajeet's Rs 60,000, and the only figure left above Rs 60,000 is Rs 70,000. Arvind cannot be the Doctor, since Rs 50,000 is less than Rs 60,000, so Arvind is the MD on Rs 70,000, and Chinmay, the last person, becomes the Doctor on Rs 50,000.

Step 4: Rank all four salaries.

Rs 70,000, Arvind, is greater than Rs 60,000, Biswajeet, which is greater than Rs 50,000, Chinmay, which is greater than Rs 40,000, Dhruv. Arvind sits at the top of this ranking.

Final Answer:

Arvind holds the highest starting salary of Rs 70,000.

Arvind

Quick Tip: The MD earned the most. Work out whether Arvind or Chinmay is the MD using the Arvind earned more than Biswajeet clue.

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134. A man has a job which requires him to work 8 straight days and rest on the ninth day. If he started work on a Monday, the 12th time he rests will be on what day of the week?

- (A) Sunday
- (B) Wednesday
- (C) Tuesday
- (D) Friday

Correct Answer: (B) Wednesday

SOLUTION:

Step 1: Notice how the rest day shifts each cycle.

Each work rest cycle is 9 days long, but the week is only 7 days long. Since $9 = 7 + 2$, every new cycle's rest day lands exactly 2 weekdays later than the previous rest day.

Step 2: Find the first rest day.

He works days 1 to 8 and rests on day 9. Day 1 is Monday, so day 9 is 8 days later, the same weekday as 1 day later since $8 = 7 + 1$, that is, Tuesday. So rest 1 falls on a Tuesday.

Step 3: Step forward 2 weekdays per rest, eleven more times.

Starting from Tuesday and adding 2 weekdays each time for rests 2 through 12: Rest 1, Tuesday. Rest 2, Thursday. Rest 3, Saturday. Rest 4, Monday. Rest 5, Wednesday. Rest 6, Friday. Rest 7, Sunday. Rest 8, Tuesday. Rest 9, Thursday. Rest 10, Saturday. Rest 11, Monday. Rest 12, Wednesday.

Step 4: Check the total shift.

From rest 1 to rest 12 is 11 steps of 2 weekdays each, that is $11 \times 2 = 22$ weekdays. Since $22 = 3 \times 7 + 1$, this is the same as shifting 1 weekday forward from Tuesday, which lands on Wednesday, matching the day by day count above.

Final Answer:

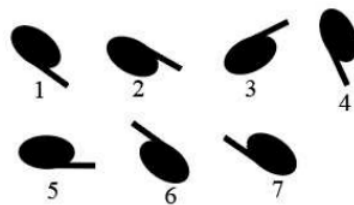
The 12th rest day is a Wednesday.

Wednesday

Quick Tip: The rest days fall on day numbers 9, 18, 27, and so on. Find day number 108, the 12th rest, and count that many days after the starting Monday, using the fact that the week repeats every 7 days.

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135. From the images below (1 to 7), find the 3 odd ones out.



- (A) 1, 2, 3
- (B) 2, 3, 7
- (C) 3, 7, 4
- (D) 4, 1, 6

Correct Answer: (B) 2, 3, 7

SOLUTION:

Step 1: Compare figures in pairs instead of rotating all seven at once.

Take figure 1 as a reference. Its head is oval, tilted diagonally, with the handle coming out of the lower end of the oval and continuing in roughly the same diagonal direction.

Step 2: Check figures 4, 5 and 6 against figure 1.

Figure 4 is simply figure 1 turned to a steeper angle, figure 5 is figure 1 turned so the oval lies flat, and figure 6 is figure 1 turned so the handle points up and to the left instead of down and to the right. In every one of these three, the head sits on the same side relative to the handle as it does in figure 1, only the amount of turning is different. So 1, 4, 5 and 6 form one matching group, related purely by rotation.

Step 3: Check figures 2, 3 and 7 against figure 1.

In figure 2, the oval head sits on the side of the handle opposite to where it sits in figure 1, once both are turned to point the same way. The same swap shows up in figure 3 and again in figure 7, in each of these three, the head has flipped to the other side of the handle, which a plain rotation cannot produce.

Step 4: Conclude which figures are the mismatches.

A shape and its mirror image always differ in exactly this way, the handedness flips even though the outline looks similar at a glance. Since 2, 3 and 7 all show this flipped handedness compared to the group of 1, 4, 5, 6, they are the three figures that do not belong with the rest.

Final Answer:

Figures 2, 3 and 7 are the three odd ones out.

2, 3, 7

Quick Tip: Turn each figure so its handle points the same direction, then check which side the rounded head leans toward. Three figures lean the opposite way from the other four.

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136. Babloo and Bunty describe the result of a race among Snehal, Tanmay, and Waman.

Babloo: "Tanmay won; Waman was second."

Bunty: "Snehal won; Tanmay came second."

Each boy made exactly one true and one false statement. What was the correct finishing order (1st, 2nd, 3rd)?

- (A) Snehal, Waman, Tanmay
- (B) Snehal, Tanmay, Waman
- (C) Waman, Snehal, Tanmay
- (D) Tanmay, Waman, Snehal

Correct Answer: (A) Snehal, Waman, Tanmay

SOLUTION:

Step 1: List every possible finishing order of the three runners.

With three runners, Snehal, S, Tanmay, T, and Waman, W, there are 6 possible orders for first, second and third place: STW, SWT, TSW, TWS, WST, WTS.

Step 2: Score each order against Babloo's two claims.

Babloo's claims are Tanmay won, true only for orders starting with T, and Waman was second, true only when W is in the middle position. For each order, count how many of these two claims are true: STW, neither true, 0. SWT, only Waman second is true, 1. TSW, only Tanmay won is true, 1. TWS, both true, 2. WST, neither true, 0. WTS, neither true, 0.

Step 3: Score each order against Bunty's two claims and keep only orders scoring exactly 1 on both counts.

Bunty's claims are Snehal won, true only for orders starting with S, and Tanmay came second, true only when T is in the middle position.

From Step 2, only SWT and TSW scored exactly 1 for Babloo, so only these two orders can possibly work, every other order is already eliminated.

Check SWT against Bunty: Snehal won is true, S is first, Tanmay came second is false, W is second not T, so this scores 1 for Bunty too. Check TSW against Bunty: Snehal won is false, T is first not S, Tanmay came second is false, S is second not T, so this scores 0 for Bunty, and is rejected.

Step 4: Confirm the surviving order.

Only SWT, Snehal first, Waman second, Tanmay third, gives exactly one true and one false statement for both Babloo and Bunty at the same time.

Final Answer:

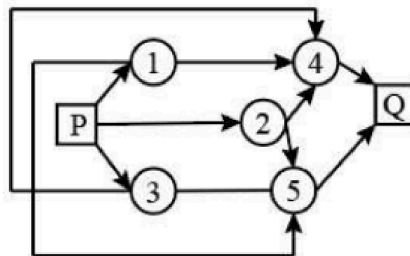
The race finished Snehal first, Waman second, Tanmay third.

Snehal, Waman, Tanmay

Quick Tip: Try each of Babloo's two claims as the true one in turn, work out the order it forces, and keep only the version where Bunty also ends up with exactly one true and one false claim.

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137. What is the number of routes from P to Q in the network shown?



- (A) 5
- (B) 6
- (C) 9
- (D) 12

Correct Answer: (C) 9

SOLUTION:

A different way to count the same routes is to sort them by which node they use right before reaching Q , either node 4 or node 5, instead of sorting them by the first node they visit after P .

1. **Routes ending in $4 \rightarrow Q$:** $P \rightarrow 1 \rightarrow 4 \rightarrow Q$, $P \rightarrow 2 \rightarrow 4 \rightarrow Q$, $P \rightarrow 3 \rightarrow 4 \rightarrow Q$, $P \rightarrow 1 \rightarrow 2 \rightarrow 4 \rightarrow Q$, and $P \rightarrow 3 \rightarrow 2 \rightarrow 4 \rightarrow Q$. That is 5 distinct paths.
2. **Routes ending in $5 \rightarrow Q$:** $P \rightarrow 1 \rightarrow 5 \rightarrow Q$, $P \rightarrow 2 \rightarrow 5 \rightarrow Q$, $P \rightarrow 1 \rightarrow 2 \rightarrow 5 \rightarrow Q$, and $P \rightarrow 3 \rightarrow 2 \rightarrow 5 \rightarrow Q$. That is 4 distinct paths.

Let's summarize:

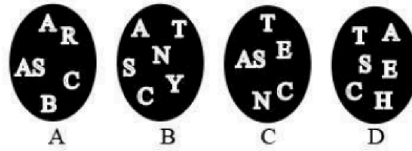
- Every route must enter Q from either node 4 or node 5, since those are the only two arrows pointing into Q .
- Splitting the count this way avoids double counting, because no single route can pass through both node 4 and node 5.

Adding the two groups gives $5 + 4 = 9$ routes in total, the same answer found by grouping from the P side.

Quick Tip: Trace every left-to-right arrow path from *P* to *Q* one node at a time, and count separately the routes through node 1, through node 2 directly, and through node 3, being careful not to double count paths that reach node 2 via node 1 or node 3.

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138. Find the circle that does *not* include a word using all its letters.



- (A) A
- (B) B
- (C) C
- (D) D

Correct Answer: (A) A

SOLUTION:

Step 1: Understanding the Concept:

Each of the four circles scatters six letters, and three of the four circles can be read as one meaningful English word once the letters are rearranged. Only one circle has no such word.

Step 2: Key Formula or Approach:

Sort the letters of each circle alphabetically first, since that makes it much easier to spot a hidden word or common ending such as -ANTY, -SCENT, or -ASTE.

Step 3: Detailed Explanation:

Circle B has A, C, N, S, T, Y, which rearranges to SCANTY.

Circle C has A, C, E, N, S, T, which rearranges to ASCENT.

Circle D has A, C, E, H, S, T, which rearranges to CHASTE.

Circle A has A, A, B, C, R, S. The double A is unusual for a six-letter word. Removing one A leaves A, B, C, R, S, which spells CRABS, but that is only five letters, not six. No arrangement of all six letters A, A, B, C, R, S spells a real English word.

Step 4: Final Answer:

Circles B, C, and D form SCANTY, ASCENT, and CHASTE respectively, but circle A cannot form any six-letter word because of its repeated A.

Circle A

Quick Tip: Rearrange the six letters of each circle. Three circles spell an ordinary English word; look closely at which circle repeats a letter in a way that blocks any word from forming.

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139. Eight of the nine numbers **2, 3, 4, 5, 7, 10, 11, 12, 13** are to be placed in the empty cells of the 3×4 array (with **1, 9, 14, 15** already placed) so that the arithmetic average of the numbers in each row and each column is the same integer. Which one number must be left out?

1			15
	9		
		14	

- (A) 4
- (B) 10
- (C) 15
- (D) 7

Correct Answer: (B) 10

SOLUTION:

- Instead of using divisibility rules first, we can find the answer by trying to actually build a valid 3×4 grid and seeing which number refuses to fit.
- Row and column targets:** the four fixed numbers 1, 9, 14, 15 sum to 39, while the nine candidates sum to 67. The full grid, missing one candidate x , totals $106 - x$. For a whole-number average M across 3 rows and 4 columns, this total must equal $12M$.
 - Testing $x = 15$:** this is not even among the nine candidate numbers offered, so it cannot be the missing one.
 - Testing $x = 4$ and $x = 7$:** these give totals of 102 and 99, and neither divides evenly by 12, so no common integer average is possible in either case.
 - Testing $x = 10$:** this gives a total of 96, and $96/12 = 8$ exactly, so a common average of 8 is at least numerically possible.

To be sure $x = 10$ truly works and is not just numerically convenient, build the grid directly with average 8 (row sum 32, column sum 24): placing 13, 3 in row 1, 11, 7, 5 in row 2, and 12, 2, 4 in row 3 alongside the fixed numbers gives every row summing to 32 and every column summing to 24, using all nine candidates except 10.

Let's summarize:

- Only $x = 10$ produces a total divisible by 12.
- A complete, valid grid can actually be built while leaving out 10, confirming it is not just a coincidence of arithmetic.

So the number that must be left out of the grid is 10.

Quick Tip: The total of all 12 numbers in the grid must be a multiple of 12, since it equals 3 times the row sum. Test each option against this rule before trying to build the grid.

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140. What number will replace the question mark?



- (A) 40
(B) 18
(C) 19
(D) 24

Correct Answer: (B) 18

SOLUTION:

Rather than jumping straight to a formula, it helps to first rule out the simpler relationships, like addition, before landing on multiplication.

1. **Try addition first:** in Group 1, $t_1 + t_2 = 6 + 8 = 14$, while $s + c = 8 + 12 = 20$. In Group 2, $t_1 + t_2 = 5 + 6 = 11$, while $s + c = 10 + 6 = 16$. The gap is 6 in the first case and 5 in the second, so a simple addition rule does not hold across both groups.
2. **Try the ratio of the triangle product to the square:** in Group 1, $t_1 t_2 / s = 48 / 8 = 6$, and the circle is 12, exactly twice that. In Group 2, $t_1 t_2 / s = 30 / 10 = 3$, and the circle is 6, again exactly twice that.
3. **State the rule:** the circle always equals twice the product of the two triangles, divided by the square, that is $c = \frac{2t_1 t_2}{s}$.

Applying this to Group 3, where $t_1 = 3$, $t_2 = 12$, and $s = 4$: $c = \frac{2 \times 3 \times 12}{4} = \frac{72}{4} = 18$.

Let's summarize:

- Addition does not give a consistent rule across the three groups.
- The circle equals twice the triangle product divided by the square, in every group.

So the number that replaces the question mark is 18.

Quick Tip: Compare the product of the two triangle numbers with the product of the square and circle numbers in each group. One is always exactly double the other.

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141. Where should the letter 'W' be placed?

B	C	D	E	J	K	L	M
A	F	G	H	I	N		

- (A) Above
(B) Below
(C) Both
(D) None

Correct Answer: (B) Below

SOLUTION:

A quicker way to place W is to work with alphabet positions directly instead of writing out every block of letters.

1. **Assign positions:** number the alphabet from A = 1 to Z = 26. W is the 23rd letter.

2. **Set up the repeating cycle:** after the single letter A, the rest of the alphabet, positions 2 to 26, splits into blocks of 4 that alternate above and below the line, starting with "above" for B, C, D, E.
3. **Locate W within the cycle:** subtract 2 from W's position to measure its distance from B: $23 - 2 = 21$.
Dividing by 4 gives $21 \div 4 = 5$ remainder 1, so W sits in block number 5, counting the BCDE block as block 0.
4. **Check whether that block is above or below:** block 0 (BCDE) is above, block 1 (FGHI) is below, block 2 (JKLM) is above, block 3 (NOPQ) is below, block 4 (RSTU) is above, block 5 (VWXY) is below.

Block 5 is odd in this counting, so it sits below the line, and W falls inside block 5, the group V, W, X, Y.

Let's summarize:

- W is the 23rd letter of the alphabet, landing in the VWXY group.
- Counting blocks of 4 from B, the VWXY group is an odd-numbered block, which the pattern places below the line.

W therefore belongs below the line, confirming the same answer reached by listing out the blocks directly.

Quick Tip: After the lone letter A, the alphabet splits into blocks of four letters that alternate above and below the line. Work out which block W falls into.

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142. At a family reunion were the following people: one grandfather, one grandmother, two fathers, two mothers, four children, three grandchildren, one brother, two sisters, two sons, two daughters, one father-in-law, one mother-in-law, and one daughter-in-law. But not as many people attended as it sounds. How many people were there?

- (A) 5
(B) 10
(C) 15
(D) 7

Correct Answer: (D) 7

SOLUTION:

Another way to solve this is to sort the family into three generations and check that the role list needs nothing more than a small family spanning those three generations.

1. **Generation 1 (grandparents):** one grandfather and one grandmother. Since their son is married, the grandfather automatically becomes a father-in-law and the grandmother automatically becomes a mother-in-law to the son's wife, with no extra people needed.
2. **Generation 2 (parents):** the grandparents' son and his wife. The son is a father to his own children and a son to his parents, filling one "father" role and one "son" role at once. His wife is a mother to her children and a daughter-in-law to his parents, filling one "mother" role and the "daughter-in-law" role at once.
3. **Generation 3 (children):** one son and two daughters born to the couple in generation 2. The son is a brother to his sisters and the second "son" in the list. The two daughters are sisters to their brother and the two "daughters" in the list. Together, these three are also the three grandchildren of generation 1.

Every phrase in the question now has an owner: two fathers (generation 1's father and generation 2's father), two mothers (generation 1's mother and generation 2's mother), four children (the generation 2 son counts as a child of

generation 1, plus the three generation 3 kids), three grandchildren (generation 3), one brother and two sisters (generation 3), two sons and two daughters (spread across generations 2 and 3), and one father-in-law, one mother-in-law, one daughter-in-law (generation 1 paired with generation 2's wife).

Let's summarize:

- Three generations are enough: 2 grandparents, 2 parents, and 3 children.
- Every role in the long list is one of these 7 people viewed from a different relationship.

So exactly 7 people attended the reunion.

Quick Tip: Most of the roles overlap: one person can be a father, a son, and a son-in-law all at once. Try to build the smallest possible three-generation family that covers every role listed.

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143. On the counter are six squares marked 1, 2, 3, 4, 5, 6. Players are invited to place as much money as they wish on any one square. Three dice are then thrown.

- If your number appears on one die only, you get your money back plus the same amount.
- If two dice show your number, you get your money back plus twice the amount you placed on the square.
- If your number appears on all three dice, you get your money back plus three times the amount.
- If the number is not on any of the dice, the operator gets your money.

For example, suppose that you bet one Rupee on square No. 6. If one die shows a 6, you get your Rupee back plus another Rupee. If two dice show 6, you get back your Rupee plus two Rupees. If three dice show 6, you get your Rupee back plus three Rupees. From a player's point of view, the chance of his number showing on one die is $\frac{1}{6}$, but since there are three dice, the chances must be $\frac{3}{6}$ or $\frac{1}{2}$, therefore the game is a fair one. Of course this is the way the operator of the game wants everyone to reason, for it is quite fallacious. What is the probable story?

- (A) Operator gets a profit of 6% on each Rupee bet.
- (B) Operator suffers a loss of 7.8% on each Rupee bet.
- (C) Operator gets a profit of 7.8% on each Rupee bet.
- (D) The player suffers a loss of 6% on each Rupee bet.

Correct Answer: (C) Operator gets a profit of 7.8% on each Rupee bet.

SOLUTION:

A cleaner way to see the house edge is to compute the total amount the operator expects to hand back to the player per Rupee staked, and compare that to the Rupee actually staked, instead of computing the operator's gains and losses outcome by outcome.

1. **List what the player receives in each case:** nothing back if the number misses all three dice, 2 Rupees back (the stake plus 1) if it hits exactly one die, 3 Rupees back if it hits exactly two dice, and 4 Rupees back if it hits all three dice.
2. **Weight each payout by its true probability**, using $P(\text{none}) = 125/216$, $P(\text{one}) = 75/216$, $P(\text{two}) = 15/216$, and $P(\text{three}) = 1/216$.

3. **Compute the expected payout:** $E[\text{payout}] = \frac{125}{216}(0) + \frac{75}{216}(2) + \frac{15}{216}(3) + \frac{1}{216}(4) = \frac{0 + 150 + 45 + 4}{216} = \frac{199}{216}$.

4. **Compare to the stake:** the player risked a full Rupee, worth $216/216$ in the same units, but only expects $199/216$ back on average.

The shortfall is $\frac{216 - 199}{216} = \frac{17}{216} \approx 0.0787$, or about 7.8% of every Rupee staked. That 7.8% is exactly the operator's expected profit margin, since whatever the player expects to lose, the operator expects to gain.

Let's summarize:

- The naive claim that three $1/6$ chances add to a fair $1/2$ ignores that the reward only scales 1x, 2x, or 3x while the chance of a double or triple hit is tiny.
- Weighting every payout by its real probability shows the player recovers only about 92.2% of the stake on average.

So the true story is that the operator earns a profit of about 7.8% on every Rupee bet, not that the game is fair.

Quick Tip: Do not just add the three $\frac{1}{6}$ chances together. Work out the exact probability of matching on 0, 1, 2, or 3 dice using $6^3 = 216$ total outcomes, then weigh each payout against those probabilities.

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144. Jaideep was given some money by his mother on his birthday. Jaideep spent all of it in five stores. In each store he spent one rupee more than half of what he had when he came in. How much did he get from his mother?

- (A) Rs. 25
(B) Rs. 30
(C) Rs. 50
(D) Rs. 62

Correct Answer: (D) Rs. 62

SOLUTION:

Instead of working backwards from the last store, we can write the amount left after each store as a single algebraic expression in terms of the starting amount x , and solve directly.

1. **After store 1:** remaining $= \frac{x}{2} - 1$.
2. **After store 2:** remaining $= \frac{1}{2} \left(\frac{x}{2} - 1 \right) - 1 = \frac{x}{4} - \frac{3}{2}$.
3. **After store 3:** remaining $= \frac{1}{2} \left(\frac{x}{4} - \frac{3}{2} \right) - 1 = \frac{x}{8} - \frac{7}{4}$.
4. **After store 4:** remaining $= \frac{1}{2} \left(\frac{x}{8} - \frac{7}{4} \right) - 1 = \frac{x}{16} - \frac{15}{8}$.
5. **After store 5:** remaining $= \frac{1}{2} \left(\frac{x}{16} - \frac{15}{8} \right) - 1 = \frac{x}{32} - \frac{31}{16}$.

Since he has spent everything after the fifth store, this final remainder equals 0: $\frac{x}{32} - \frac{31}{16} = 0$, so $\frac{x}{32} = \frac{31}{16}$, giving $x = \frac{31}{16} \times 32 = 62$.

Notice the pattern in the fractions subtracted at each stage: $1, \frac{3}{2}, \frac{7}{4}, \frac{15}{8}, \frac{31}{16}$. Each numerator is one less than a power of 2 (1, 3, 7, 15, 31), a useful shortcut for repeat-halving problems like this one.

Let's summarize:

- Building one combined formula for the amount left after n stores avoids repeated backward substitution.
- Setting that formula to 0 for $n = 5$ gives $x = 62$ directly.
- Rs 30 fails the problem's own condition, since starting from Rs 30 he runs out of money after only four stores, not five.

So Jaideep received Rs 62 from his mother.

Quick Tip: Work backwards from the fact that nothing is left after the fifth store. If he leaves each store with $\frac{y}{2} - 1$, then what he had entering that store is $2(\text{amount left} + 1)$.

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145. Consider the following two statements to be true, even if they seem to be at variance from commonly known facts. Then decide which of the given conclusions logically follows from the two given statements.

Statements: All lawyers are extrovert. Some wise men are extrovert.

Conclusions:

- (a) All lawyers are wise men.
 - (b) All wise men are lawyers.
 - (c) Some extrovert are wise men.
 - (d) All extrovert are lawyers.
- (A) Only (a) follows
(B) Only (b) and (c) follow
(C) Only (a) and (c) follow
(D) Only (c) follows

Correct Answer: (D) Only (c) follows

SOLUTION:

This question checks how well you apply the rules of syllogism to two statements: "All lawyers are extrovert" and "Some wise men are extrovert." Picture two circles: a small circle for lawyers sitting completely inside a bigger circle for extroverts, and a separate circle for wise men that overlaps the extrovert circle somewhere.

1. **(a) All lawyers are wise men:** the lawyer circle sits inside the extrovert circle, and the wise men circle overlaps the extrovert circle in a different, unconnected spot. Nothing forces lawyers and wise men to overlap, so this cannot be drawn.
2. **(b) All wise men are lawyers:** this would need the wise men circle to sit entirely inside the lawyer circle, but we only know wise men overlap extroverts, not lawyers directly. This is not supported.
3. **(c) Some extrovert are wise men:** "some wise men are extrovert" literally means the wise men and extrovert circles share a region. A shared region is a two way fact, so it is equally true that "some extrovert are wise men." This conclusion always holds.
4. **(d) All extrovert are lawyers:** this flips "all lawyers are extrovert" into "all extrovert are lawyers," a classic reversal error. A universal statement can only be partly reversed to "some," never fully reversed to "all."

Only conclusion (c) survives this check, which matches option (D).

Let's summarize:

- A universal statement like "All A are B" cannot be flipped into "All B are A."
- A particular statement like "Some A are B" can always be flipped into "Some B are A."

The only conclusion that logically follows is (c), some extrovert are wise men, so option (D) is correct.

Quick Tip: A "some" statement can always be reversed (some A are B implies some B are A), but an "all" statement can never be fully reversed.

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146. The following are the results of a survey conducted on a small cross-section of students from the Symbiosis Group of institutes, to determine the readership of three magazines: Business India, Outlook and India Today. This survey was conducted in December 2006.

Number of students who read only Business India = 40

Number of students who read only Outlook = 60

Number of students who read only India Today = 110

Number of students who read all three magazines = 30

Number of students who read Business India and India Today, but not Outlook = 20

Number of students who read Business India and Outlook, but not India Today = 50

Number of students who read Outlook and India Today, but not Business India = 40

What was the total number of students surveyed?

- (A) 210
- (B) 350
- (C) 390
- (D) None of these

Correct Answer: (B) 350

SOLUTION:

Think of this as filling in a three circle Venn diagram, one circle each for Business India (BI), Outlook (OL) and India Today (IT). The survey hands you every one of the seven inner regions directly, so finding the total surveyed just means adding every region once.

1. **Regions with exactly one magazine:** only BI = 40, only OL = 60, only IT = 110. Adding these gives $40 + 60 + 110 = 210$ students who read exactly one magazine.
2. **Regions with exactly two magazines:** BI and IT but not OL = 20, BI and OL but not IT = 50, OL and IT but not BI = 40. Adding these gives $20 + 50 + 40 = 110$ students who read exactly two magazines.
3. **The region with all three magazines:** given directly as 30 students.

Since these three groups (exactly one, exactly two, all three) cover the whole surveyed population without any overlap or gap, add them together: $210 + 110 + 30 = 350$.

Let's summarize:

- A three set Venn diagram always has seven non-overlapping inner regions.
- Adding every region once, and only once, gives the grand total.

The total number of students surveyed is 350, so option (B) is correct.

Quick Tip: Add up every distinct Venn diagram region (only one magazine, plus exactly two magazines, plus all three) exactly once.

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147. The following are the results of a survey conducted on a small cross-section of students from the Symbiosis Group of institutes, to determine the readership of three magazines: Business India, Outlook and India Today. This survey was conducted in December 2006.

Number of students who read only Business India = 40

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Number of students who read only India Today = 110

Number of students who read all three magazines = 30

Number of students who read Business India and India Today, but not Outlook = 20

Number of students who read Business India and Outlook, but not India Today = 50

Number of students who read Outlook and India Today, but not Business India = 40

How many students did not read Business India?

- (A) 40
- (B) 170
- (C) 240
- (D) None of these

Correct Answer: (D) None of these

SOLUTION:

A quicker route here is to find the total who did read Business India, in any combination, and subtract that from the total surveyed found earlier.

1. **Everyone touching the Business India circle:** only BI = 40, BI and IT only = 20, BI and OL only = 50, all three = 30. Adding these: $40 + 20 + 50 + 30 = 140$ students read Business India in some form.
2. **Total surveyed:** 350 students, as found in the total surveyed calculation.
3. **Students who did not read Business India:** subtract the Business India readers from the total: $350 - 140 = 210$.

Checking the given options, 40, 170 and 240 are all wrong, and 210 is not listed either.

Let's summarize:

- "Did not read X" equals total surveyed minus everyone who touches the X circle in any way.

- Always add every region that touches Business India before subtracting, not just the "only Business India" figure.

Since 210 does not match any listed number, the correct answer is option (D), None of these.

Quick Tip: Subtract everyone who touches the Business India circle (only BI, plus both overlaps with BI, plus all three) from the total surveyed.

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148. Using the same survey data from the earlier questions: in May 2007, with the same group of students, all of them read India Today, 120 read Outlook, and none read Business India.

How many students read only India Today?

- (A) 60
- (B) 110
- (C) 230
- (D) None of these

Correct Answer: (C) 230

SOLUTION:

In May 2007 the picture becomes much simpler than the three magazine survey from before. Every one of the 350 students now reads India Today, so the India Today circle stretches over the whole group. Business India drops out completely since nobody reads it, leaving just India Today and Outlook to sort out.

1. **Whole group reads India Today:** this means India Today itself equals the full 350 students.
2. **Outlook readers:** 120 students also pick up Outlook. Since Business India is out of the picture, these 120 must sit inside the India Today circle too, there is nowhere else for them to be.
3. **Only India Today readers:** these are the students left over once the Outlook overlap is removed from the full group of 350.

So only India Today readers = $350 - 120 = 230$.

Let's summarize:

- When "all" read a magazine, that magazine's circle becomes the entire surveyed population.
- "Only that magazine" then just means subtracting every other magazine's readers from the total.

230 students read only India Today in May 2007, which corresponds to option (C).

Quick Tip: Since every student reads India Today in May 2007, only-India-Today readers equal total students minus Outlook readers.

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149. An ingredient in coffee, known as RTC, has been found to inactivate common cold viruses in experiments. In earlier experiments, researchers found that inactivated common cold viruses can convert healthy cells into cancer cells. It can be concluded that the use of coffee can cause cancer.

Which one of the following, if true, most seriously weakens the argument?

- (A) Several teams of scientists performed the various experiments, and all of the teams had similar results.
- (B) The carcinogenic effect of RTC could be neutralized by the other ingredients found in coffee.
- (C) When RTC kills common cold viruses it weakens the immune system, and this might diminish the body's ability to fight other viruses, including viruses linked to cancers.
- (D) If chemists modify the structure of RTC, RTC can be safely incorporated into medications to prevent the common cold.

Correct Answer: (C) When RTC kills common cold viruses it weakens the immune system, and this might diminish the body's ability to fight other viruses, including viruses linked to cancers.

SOLUTION:

Step 1: Understanding the Concept:

This is a weaken-the-argument question from critical reasoning. We must find the option that most damages the logical link between the premises and the conclusion, without simply contradicting a fact outright.

Step 2: Key Formula or Approach:

First write out the argument's exact chain of cause and effect: RTC inactivates the cold virus, inactivated cold viruses can turn cells cancerous (per earlier experiments), so coffee, which contains RTC, can cause cancer. A weakening answer must attack one of the links in this chain, ideally by offering a different explanation for the same outcome.

Step 3: Detailed Explanation:

Option A talks about experimental reliability across multiple teams, which supports the premises rather than attacking the conclusion, so it strengthens the argument instead of weakening it.

Option D discusses a hypothetical, chemically modified version of RTC used in future medicine, which says nothing about whether today's natural RTC in coffee causes cancer, so it is irrelevant to the argument as stated.

Option B claims other coffee ingredients cancel out RTC's carcinogenic effect. This is a reasonable weakener, but it just asserts a counteracting effect without explaining why, and offers little real insight into the actual cancer risk mechanism.

Option C reframes the entire mechanism: RTC's cold fighting action works by weakening the immune system generally, and it is this general weakening, not the specific "inactivated virus becomes cancerous" idea, that could raise cancer risk from other, pre-existing cancer linked viruses. Since this points to a completely different cause for any cancer risk, it directly attacks the argument's specific causal reasoning, making it the strongest weakener.

Step 4: Final Answer:

Option C most seriously weakens the argument, since it replaces the argument's assumed mechanism with an unrelated one, breaking the causal link the conclusion depends on.

Option (C)

Quick Tip: Look for the option that offers a different cause for the cancer risk, one that breaks the argument's assumed "inactivated virus becomes cancerous" chain.

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150. A census taker approaches a house and asks the woman, "How many children do you have, and what are their ages?"

Woman: "I have three children. The product of their ages is 36, and the sum of their ages is equal to the house number of the house next door."

The census taker checks the house number, then says, "I need more information."

Woman: "My oldest child is sleeping upstairs."

What are the ages of the three children?

- (A) 9, 2, 2
- (B) 6, 6, 1
- (C) 12, 3, 1
- (D) 6, 3, 2

Correct Answer: (A) 9, 2, 2

SOLUTION:

Instead of listing every possible triple with product 36, we can test the four given options directly against the two clues: the product must be 36, the sum must tie with at least one other product-36 triple (since the census taker needed more information despite knowing the house number), and there must be a single, uniquely oldest child.

1. **9, 2, 2:** product = $9 \times 2 \times 2 = 36$, correct. Sum = 13. Another triple, 6, 6, 1, also multiplies to 36 and sums to 13, so knowing the sum alone would genuinely leave the census taker stuck between these two, matching the "I need more information" line. This triple also has a single oldest child, the 9 year old, so the last clue confirms it.
2. **6, 6, 1:** product = $6 \times 6 \times 1 = 36$, and sum = 13, so this is the other member of the tied pair. But this triple has two children aged 6, so there is no single oldest child. The clue "my oldest child is sleeping upstairs" only makes sense if one child is unambiguously the eldest, so this triple is ruled out.
3. **12, 3, 1:** product = $12 \times 3 \times 1 = 36$, correct, but the sum is 16, and no other product-36 triple also sums to 16. The census taker would have solved the puzzle instantly from the house number alone, so this triple does not fit the "need more information" line.
4. **6, 3, 2:** product = $6 \times 3 \times 2 = 36$, correct, but the sum is 11, which again is not shared by any other product-36 triple, so this too would not have caused any confusion for the census taker.

Only 9, 2, 2 satisfies both the tie-in-sum requirement and the unique-oldest-child requirement, since its "twin" triple 6, 6, 1 fails the last clue.

Let's summarize:

- The product clue alone allows many triples, so it never pins down a unique answer by itself.

- The "still need more information" line tells us the sum must be shared by two triples.
- The "single oldest child" line breaks the tie by ruling out any triple with twins at the top.

The ages of the three children are 9, 2 and 2, which is option (A).

Quick Tip: Find product-36 triples whose sums tie (this is the ambiguous house number), then use "a single oldest child" to rule out the twin option.