
Section : Quantitative Ability

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 151

A and B started a business by investing Rs. 2400 and Rs. 3600 respectively. At the end of 4th month from the start of the business, C joined with Rs. 'X'. After 8 months from the start of the business, B withdrew Rs. 600. If C's share is Rs. 8000 in the annual profit of Rs. 22,500, what was the amount that C invested in the business?

A) Rs. 7200 B) Rs. 5800 C) Rs.4000 ✓D) Rs. 4800 E) Rs. 8800

Explanation:- A's investment = $2400 \times 12 = 28800$

B's investment = $3600 \times 8 + 3000 \times 4 = 40800$

C's investment = $x \times 8 = 8x$

A : B : C = $28800 : 40800 : 8x = 3600 : 5100 : x$

Given : $x / (8700 + x) \times 22500 = 8000$

Solving we get, x (C's investment) = 4800

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 152

There are 4 consecutive odd numbers, x_1, x_2, x_3 and x_4 and three consecutive even numbers y_1, y_2 and y_3 . The average of the odd numbers is 6 less than the average of the even numbers. If the sum of the three even numbers is 16 less than the sum of the four odd numbers, what is the average of x_1, x_2, x_3 and x_4 ?

A) 30 B) 35 C) 38 D) 32 ✓E) 34

Explanation:- Let the odd numbers be $2x+1, 2x+3, 2x+5$ & $2x+7$

Their sum = $8x+16$ and average = $2x+4$

Let the even numbers be $y, y+2$ & $y+4$

Their sum = $3y+6$ and average = $y+2$

Given :

$8x+16 - (3y+6) = 16 \Rightarrow 8x - 3y = 6 \dots (i)$

$y+2 - (2x+4) = 6 \Rightarrow y - 2x = 8 \dots (ii)$

Solving (i) & (ii)

$x = 15 \Rightarrow$ the respective odd numbers are = 31, 33, 35, 37

Average = $(33 + 35)/2 = 34$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 153

A, B, C, D, E and F live on different floors in the same building having six floors numbered one to six (the ground floor is numbered 1, the floor above it, number 2 and so on and the topmost floor is numbered 6).

A lives on an even numbered floor. There are two floors between the floors on which D and F live. F lives on a floor above D's floor. D does not live on floor number 2. B does not live on an odd numbered floor. C does not live on any of the floors below F's floor. E does not live on a floor immediately above or immediately below the floor on which B lives.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 154

A, B, C, D, E and F live on different floors in the same building having six floors numbered one to six (the ground floor is numbered 1, the floor above it, number 2 and so on and the topmost floor is numbered 6).

A lives on an even numbered floor. There are two floors between the floors on which D and F live. F lives on a floor above D's floor. D does not live on floor number 2. B does not live on an odd numbered floor. C does not live on any of the floors below F's floor. E does not live on a floor immediately above or immediately below the floor on which B lives.

On which of the following floors does B live?

- ✓A) 6th B) 4th C) 2nd D) 5th E) Cannot be determined

Explanation:-

The correct order from 6th to 1st is **B C F E A D**

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 155

In a five letter English word (which may or may not be a meaningful English word), there are two letters between L and P. S is not placed immediately next to L. There is only one letter between S and A. S is towards the right of A. S is not placed immediately next to E.

Which of the following is correct with respect to the word thus formed?

- A) E is at one of the extreme ends of the word B) P is not placed immediately next to A
C) There are two letters between A and E in the word thus formed ✓D) P is placed second to the right of E
E) None is correct

Explanation:-

The word so formed is LEAPS.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 156

In a five letter English word (which may or may not be a meaningful English word), there are two letters between L and P. S is not placed immediately next to L. There is only one letter between S and A. S is towards the right of A. S is not placed immediately next to E.

Which of the following words will be formed based on the given conditions?

- A) SPAEL B) PEALS ✓C) LEAPS D) SEPAL E) LAPSE

Explanation:-

The word so formed is LEAPS.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 157

Six people- K, L, M, N, O and P live on six different floors of a building not necessarily in the same order. The lower most floor of the building is numbered 1, the one above that is numbered 2 and so on till the top most floor is numbered 6.

L lives on an even numbered floor. L lives immediately below K's floor and immediately above M's floor. P lives immediately above N's floor. P lives on an even numbered floor. O does not live on floor number 4.

Four of the following five are alike in a certain way based on the given arrangement and hence form a group. Which of the following does not belong to that group?

- A) MN B) OL C) KM D) LP ✓E) PK

Explanation:-

From the given information, we get the following arrangement:

person	floor
O	6
K	5
L	4
M	3
P	2
N	1

In all the given groups, there is only one person living in between their floors except PK, which has 2 people. Hence option 5.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 158

Six people- K, L, M, N, O and P live on six different floors of a building not necessarily in the same order. The lower most floor of the building is numbered 1, the one above that is numbered 2 and so on till the top most floor is numbered 6.

L lives on an even numbered floor. L lives immediately below K's floor and immediately above M's floor. P lives immediately above N's floor. P lives on an even numbered floor. O does not live on floor number 4.

Who amongst the following lives on floor number 2 ?

- A) K ✓B) P C) L D) M E) O

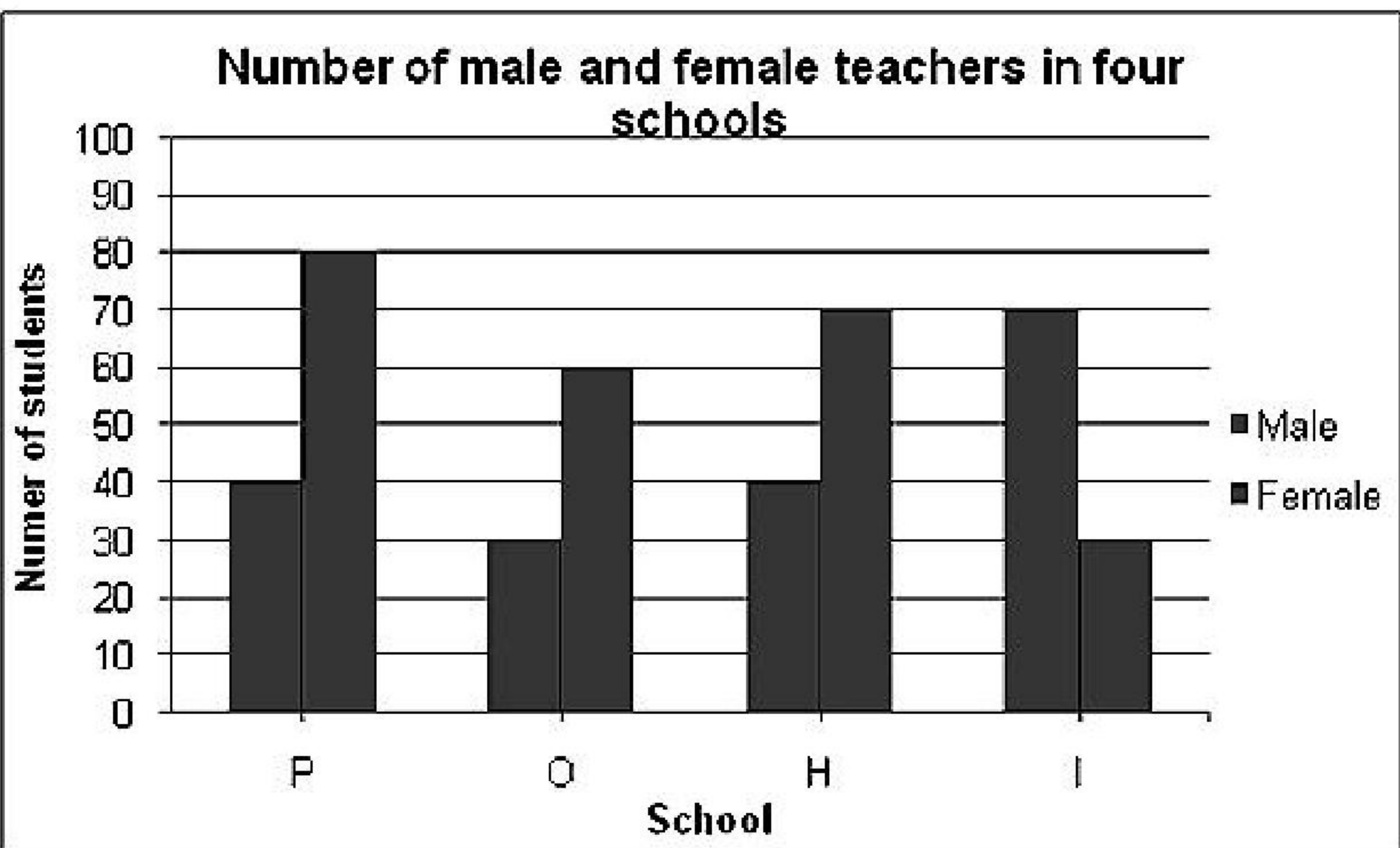
Explanation:-

From the given information, we get the following arrangement:

person	floor
O	6
K	5
L	4
M	3

DIRECTIONS for the question: Analyse the graph/s given below and answer the question that follows.

Question No. : 159



What is the difference between average numbered male and female teachers in the given schools?

- A) 10 B) 20 C) 5 D) 25 ✓E) 15

$$\text{Average number of male teachers} = \frac{40 + 30 + 40 + 70}{4} = 45$$

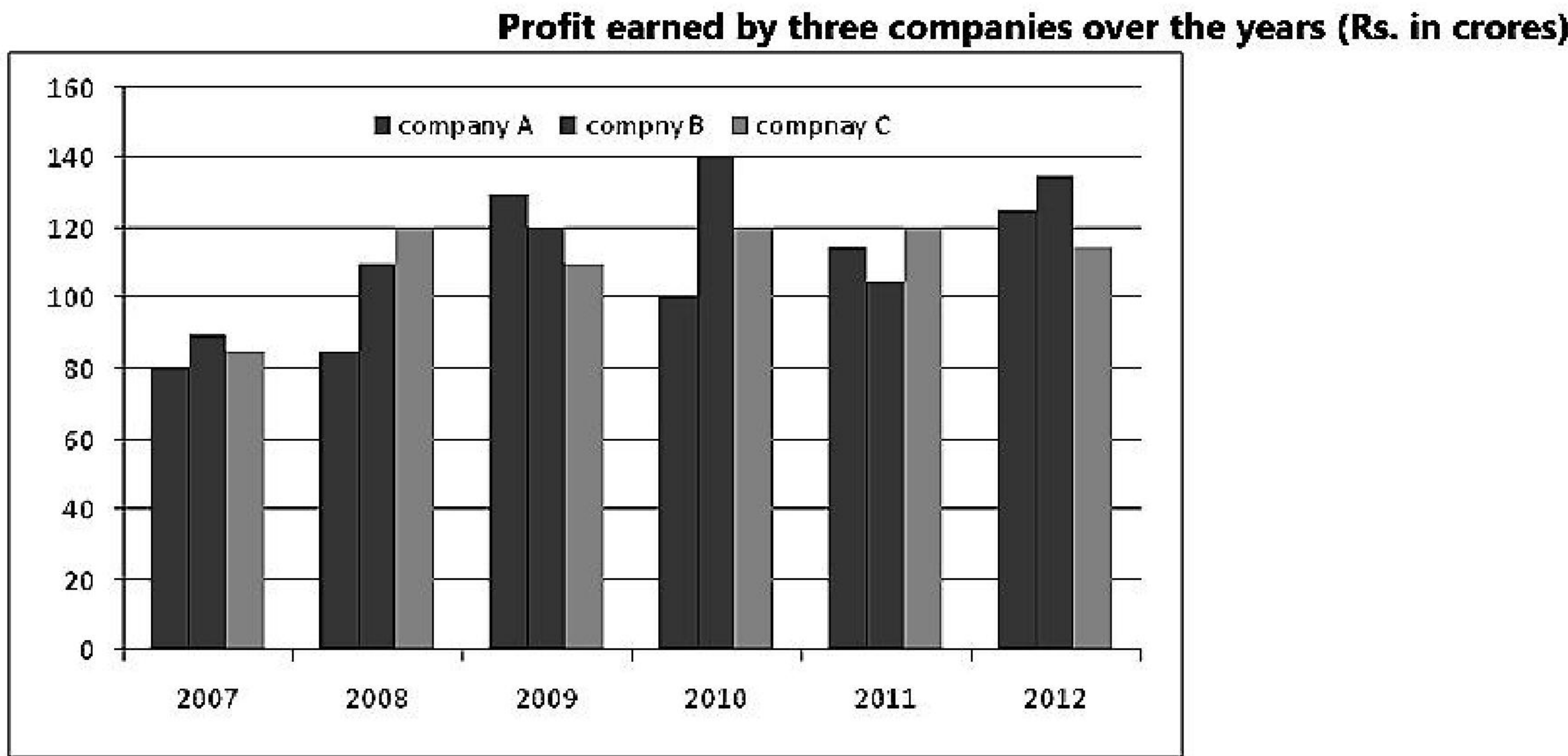
$$\text{Average number of female teachers} = \frac{80 + 60 + 70 + 30}{4} = 60$$

Explanation:-

$$\text{Required difference} = 60 - 45 = 15$$

DIRECTIONS for the question: Analyse the graph/s given below and answer the question that follows.

Question No. : 160



Approximately, what is the average profit earned by company B over the given years?

- A) Rs. 107 Crores B) Rs. 132 crores C) Rs. 124 crores ✓D) Rs. 117 crores E) Rs. 97 crores

Explanation:-

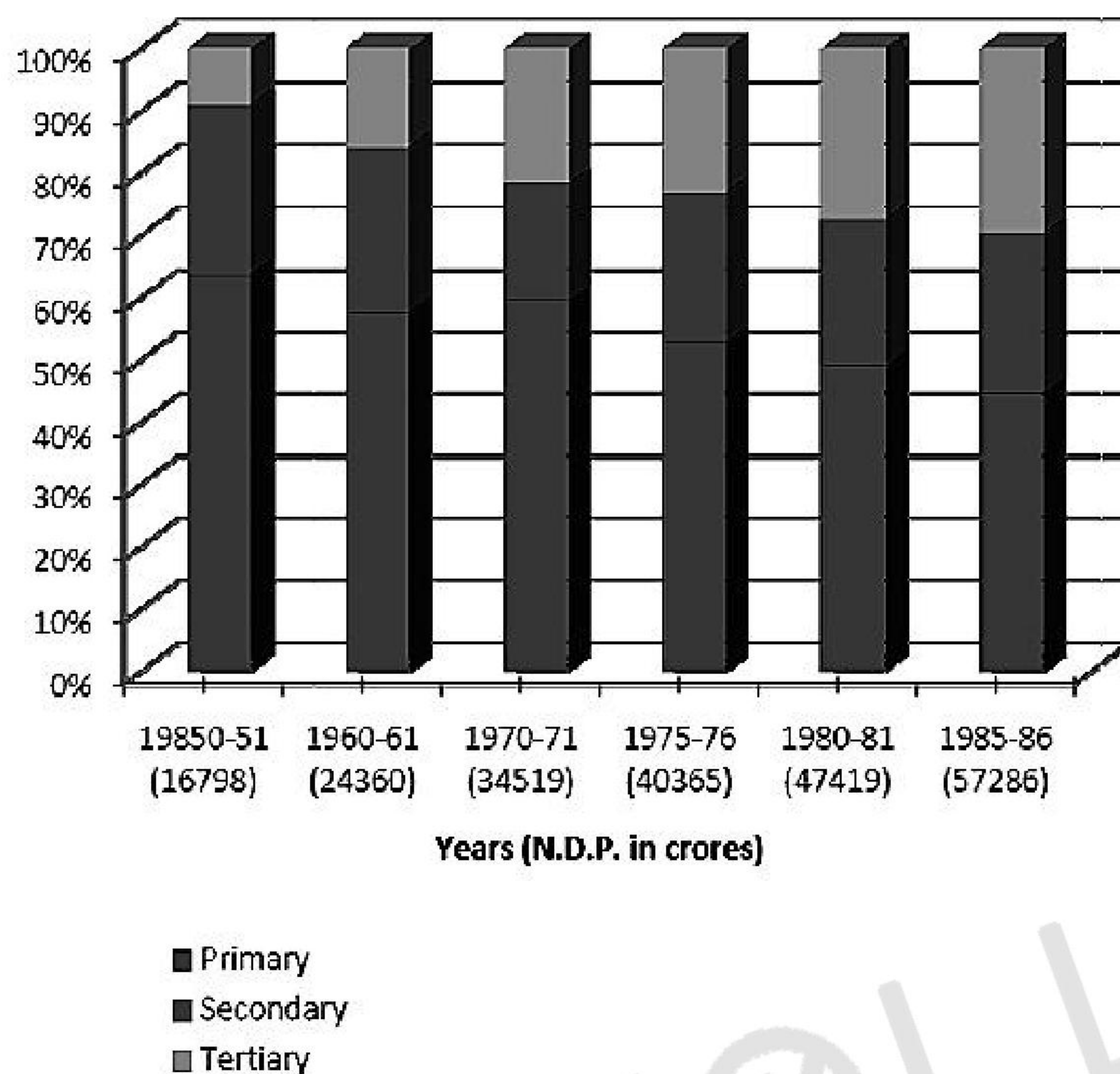
Average profit earned by company B over the given years

$$= \frac{90 + 110 + 120 + 140 + 105 + 135}{6} = 116.67 \sim 117 \text{ crores}$$

DIRECTIONS for the question: Analyse the graph/s given below and answer the question that follows.

Question No. : 161

Percentage Distribution of Domestic Produce at Factor Cost and at Constant Prices with base year 1970-71



What was the contribution (in billion rupees) of the primary sector to the N.D.P. in 1980-81?

- A) 143.7 B) 173.6 C) 189.7 ✓D) 237.1 E) 390.5

Explanation:-

Contribution (in billion rupees) of the primary sector to the N.D.P. in 1980-81

$$= \frac{50}{100} \times 47,419$$

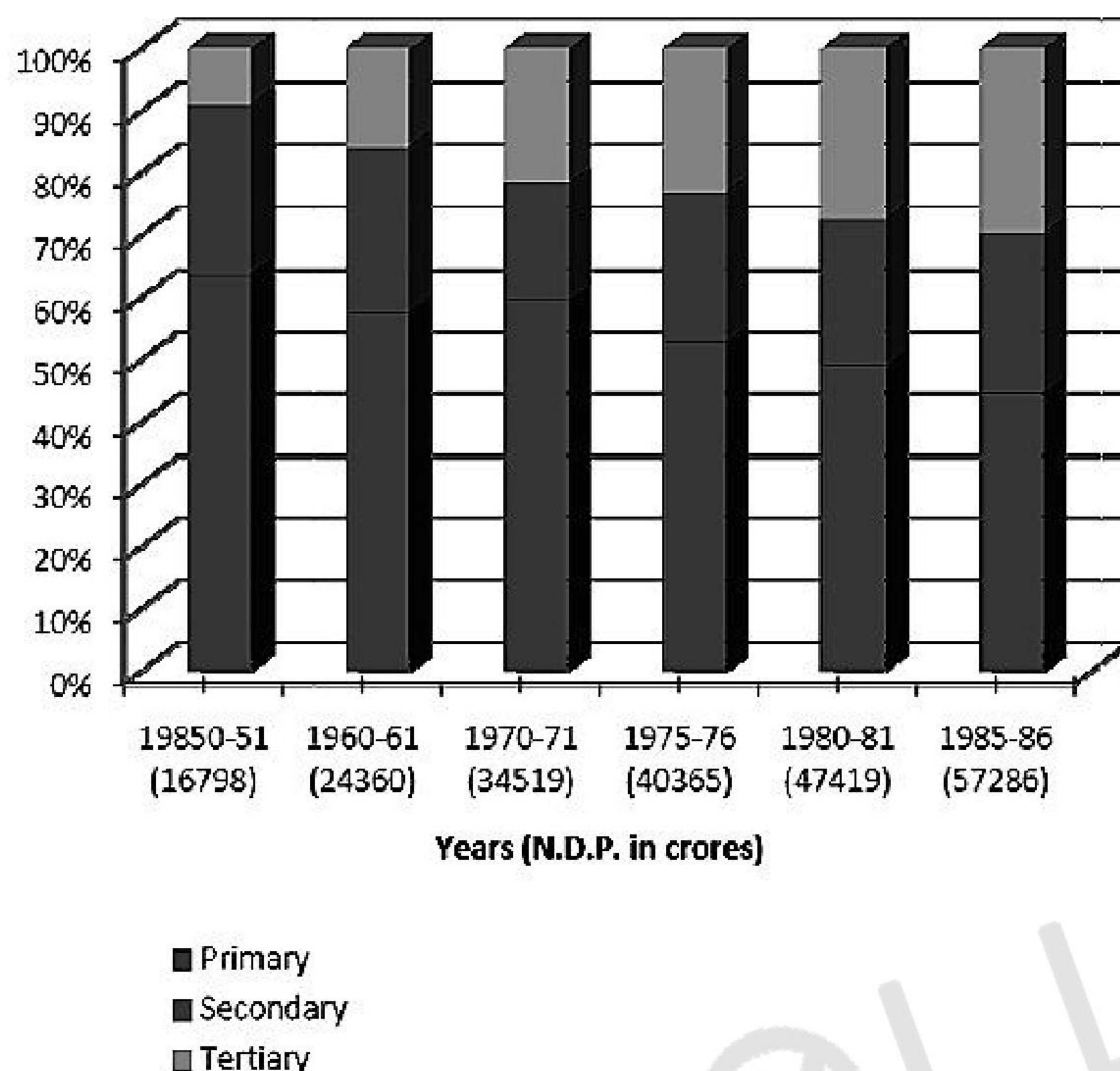
$$= \text{Rs. } 237.1 \text{ billion}$$

The correct answer is option 4.

DIRECTIONS for the question: Analyse the graph/s given below and answer the question that follows.

Question No. : 162

Percentage Distribution of Domestic Produce at Factor Cost and at Constant Prices with base year 1970-71



In which year did the contribution of the tertiary sector register the maximum percentage increase with respect to previous data given?

- A) 1950-51 ☒ B) 1960-61 C) 1970-71 D) 1980-81 E) 1985-86

Explanation:-

Approximate percentage increase in the contribution of the tertiary sector with respect to previous data given for different intervals of time is as follows:

For 1960-61,

$$\text{Percentage increase} = \frac{16 - 10}{10} \times 100$$

$$= 6/10 \times 100 = 60\%$$

For 1970-71,

$$\text{Percentage increase} = \frac{21 - 16}{16} \times 100$$

$$5/16 \times 100 = 31.25\%$$

For 1975-76,

$$\text{Percentage increase} = \frac{24 - 21}{21} \times 100$$

$$= 3/21 \times 100 = 14.28\%$$

For 1980-81,

$$\text{Percentage increase} = \frac{26 - 24}{24} \times 100$$

$$= 2/24 \times 100 = 8.33\%$$

For 1985-86,

$$\text{Percentage increase} = \frac{31 - 26}{26} \times 100$$

$$= 5/26 \times 100 = 19.23\%$$

DIRECTIONS for the question: Mark the best option:

Question No. : 163

Which among $2^{1/2}$, $3^{1/3}$, $4^{1/4}$, $6^{1/6}$ and $12^{1/12}$ is the largest?

- A) $2^{1/2}$ ☒ B) $3^{1/3}$ C) $4^{1/4}$ D) $6^{1/6}$ E) $12^{1/12}$

Explanation:-

$$2^{1/2} = (2^6)^{1/12} = (64)^{1/12}, 3^{1/3} = (3^4)^{1/12} = (81)^{1/12}, 4^{1/4} = (4^3)^{1/12} = (64)^{1/12}$$

$$6^{1/6} = (6^2)^{1/12} = (36)^{1/12}, 12^{1/12} = (12)^{1/12} \Rightarrow 3^{1/3} \text{ is largest.}$$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 164

The number of employees in Obelix Menhir Co. is a prime number and is less than 300. The ratio of the number of employees who are graduates and above, to that of employees who are not, can possibly be:

- A) 101 : 88 B) 87 : 100 C) 110 : 111 D) 85 : 98 ☒ E) 97 : 84

Explanation:-

The totals of all the ratios are 189, 187, 221, 183 and 181.

The only prime number out of these numbers is 181.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 165

When you reverse the digits of the number 13, the number increases by 18. How many other two-digit numbers increase by 18 when their digits are reversed?

- A) 5 ☒ B) 6 C) 7 D) 8 E) 10

Explanation:-

Let digit at unit place is x and ten's place is y.

$$\therefore 10y + x - (10x + y) = 18,$$

$$9y - 9x = 18, \quad y - x = 2$$

Six Cases Other than (13, 31) are

(24, 42),

(35, 53), (46, 64) (57, 75), (68, 86)

(79, 97) are possible

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 166

A bag contains 4 red balls, 6 blue balls and 8 pink balls. One ball is drawn at random and replaced with 3 pink balls. A second ball was drawn without replacement. What is the probability that the first ball drawn was either red or blue in colour and the second ball drawn was pink in colour?

DIRECTIONS for the question: Study the table/s given below and answer the question that follows.

Question No. : 167

Name of the publishing company	May		June	
	Percentage of published books distributed	Number of distributors	Percentage of published books distributed	Number of distributors
A	70%	15	85%	16
B	80%	10	84%	12
C	65%	13	75%	19
D	72%	8	52%	33
E	90%	6	88%	11

Note: All the given companies distributed the published books among its respective distributors during both the given months

In May, Company A published 100 books more than Company B. If the number of books not distributed by Company B among its distributors in May was 50% of the number of books not distributed by Company A among its distributors in the same month, what was the number of books published by Company B in May?

✓A) 300 B) 400 C) 500 D) 600 E) 700

Explanation:- Let 'b' be the number of books Published by company B. & 'a' be the number of books Published by company A
Therefore, $a = b + 100$

Number of books not distributed by Company B among its distributors in May = 20% of b

Number of books not distributed by Company A among its distributors in May = 30% of a
= 30% of (b+100)

According to question,

20% of b = 50% (30% of (b+100))

Solving this,

$b = 300$.

Number of books Published by company B = 300.

DIRECTIONS for the question: Study the table/s given below and answer the question that follows.

Question No. : 168

Name of the publishing company	May		June	
	Percentage of published books distributed	Number of distributors	Percentage of published books distributed	Number of distributors
A	70%	15	85%	16
B	80%	10	84%	12
C	65%	13	75%	19
D	72%	8	52%	33
E	90%	6	88%	11

Note: All the given companies distributed the published books among its respective distributors during both the given months

Number of books published by Company C in May and June was equal. If the average number of books received for each distributor of Company C in May and June was 168, what was the number of books published by Company C in June?

✓A) 3840 B) 3480 C) 4380 D) 4830 E) None of these

Explanation:- Let 'N' be number of published by company C in May.

Therefore, Number of books published by Company C in June= N

If the average number of books received for each distributor of Company C in May and June was 168

Avg= Total number of books received for each distributor of Company C in May and June/ Total number of distributor of company C in May and June.

Total number of books received for each distributor of Company C in May and June= $168 \times 32 = 5472$

$65\% \text{ of } N + 75\% \text{ of } N = 5376$

$140\% \text{ of } N = 5376$

$N = 3840$.

DIRECTIONS for the question: Study the table/s given below and answer the question that follows.

Question No. : 169

Name of the publishing company	May		June	
	Percentage of published books distributed	Number of distributors	Percentage of published books distributed	Number of distributors
A	70%	15	85%	16
B	80%	10	84%	12
C	65%	13	75%	19
D	72%	8	52%	33
E	90%	6	88%	11

Note: All the given companies distributed the published books among its respective distributors during both the given months

Number of books received by each distributor of Company D in May and that by each distributor of Company E in the same month was equal Number of books published by Company E in May was what percent of number of books published by Company D in the same month?

✓A) 60 B) 65 C) 55 D) Cannot be determined E) 40

Let 'D' be the published books by company D. and 'E' be the published books by E. According to the question,

$$\frac{72\% \text{ of } D}{8} = \frac{90\% \text{ of } E}{6}$$

$$\frac{D}{E} = \frac{5}{3}$$

$$\text{Required Percentage} = \frac{E}{D} \times 100 = \frac{3}{5} \times 100 = 60\%$$

Explanation:-

DIRECTIONS for the question: Study the table/s given below and answer the question that follows.

Question No. : 170

Name of the publishing company	May		June	
	Percentage of published books distributed	Number of distributors	Percentage of published books distributed	Number of distributors
A	70%	15	85%	16
B	80%	10	84%	12
C	65%	13	75%	19
D	72%	8	52%	33
E	90%	6	88%	11

Note: All the given companies distributed the published books among its respective distributors during both the given months

In June, the difference between number of books distributed by Company B and that by Company D was 864. If number of books published by Company B in June was $\frac{1}{3}$ rd of the number of the books published by Company D Company D in the same month, what was the number of books published by Company B in June?

A) 2000 B) 900 C) 1500 D) 1800 ✓E) 1200

Explanation:- Let 'D' be the published books by company D. and 'B ' be the published books by B.According to the question,
52% of D- 84% of B= 864

Given that, $B = \frac{1}{3} D$

$D = 3B$

$\Rightarrow 52\% \text{ of } 3B - 84\% \text{ of } B = 864$

$\Rightarrow 156\% \text{ of } B - 84\% \text{ of } B = 864$

$\Rightarrow 72\% \text{ of } D = 864$

$\Rightarrow D = 864 / .72 = 1200.$

DIRECTIONS for the question: Study the table/s given below and answer the question that follows.

Question No. : 171

Name of the publishing company	May		June	
	Percentage of published books distributed	Number of distributors	Percentage of published books distributed	Number of distributors
A	70%	15	85%	16
B	80%	10	84%	12
C	65%	13	75%	19
D	72%	8	52%	33
E	90%	6	88%	11

Note: All the given companies distributed the published books among its respective distributors during both the given months

DIRECTIONS for the question: Study the table/s given below and answer the question that follows.

Question No. : 172

Name of the publishing company	May		June	
	Percentage of published books distributed	Number of distributors	Percentage of published books distributed	Number of distributors
A	70%	15	85%	16
B	80%	10	84%	12
C	65%	13	75%	19
D	72%	8	52%	33
E	90%	6	88%	11

Note: All the given companies distributed the published books among its respective distributors during both the given months

Number of books received by each distributor of company E in June (Considering everyone gets equal number of books) was what percent less than the number of books not distributed by the same company among its distributors in the same month?

- A) $30\frac{1}{3}\%$ B) $32\frac{1}{3}\%$ C) $36\frac{2}{3}\%$ ☒ D) $33\frac{1}{3}\%$ E) $39\frac{2}{3}\%$

Let 'E' be the published books by company E.

$$\text{Number of books received by each distributor of company E in June} = \frac{88\% \text{ of } E}{11} = 8\% \text{ of } E$$

Number of books not distributed by the same company among its distributors in the June month = 12% of E.

$$\text{Required Percentage} = \frac{(12 - 8)\% \text{ of } E}{12\% \text{ of } E} \times 100 = \frac{4}{12} \times 100 = 33\frac{1}{3}\%$$

Explanation:-

DIRECTIONS for the question: Mark the best option

Question No. : 173

If $\frac{a}{b} = \frac{1}{3}$, $\frac{b}{c} = 2$, $\frac{c}{d} = \frac{1}{2}$, $\frac{d}{e} = 3$ and $\frac{e}{f} = \frac{1}{4}$, then what is the value of $\frac{abc}{def}$?

- ☒ A) $\frac{3}{8}$ B) $\frac{27}{8}$ C) $\frac{3}{4}$ D) $\frac{27}{4}$ E) $\frac{1}{4}$

Explanation:-

$$a/d = a/b \times b/c \times c/d = \frac{1}{3} \times 2 \times \frac{1}{2} = \frac{1}{3}$$

$$b/e = b/c \times c/d \times d/e = 2 \times \frac{1}{2} \times 3 = 3$$

$$c/f = c/d \times d/e \times e/f = \frac{1}{2} \times 3 \times \frac{1}{4} = \frac{3}{8}$$

$$abc/def = a/d \times b/e \times c/f = \frac{1}{3} \times 3 \times \frac{3}{8} = \frac{3}{8}$$

DIRECTIONS for the question: Mark the best option.

Question No. : 175

The ages of Shivali and Tanisha are in the ratio of 11 : 7 respectively. After 8 years the ratio of their ages will be 15 : 11. What is the difference in years between their ages?

- A) 4 years B) 10 years C) 6 years ☒ D) 8 years E) None of these

Explanation:-

$$S / T = 11 / 7;$$

$$(S+8) / (T+8) = 15 / 11;$$

$$\Rightarrow 11S + 88 = 15T + 120;$$

replacing S by $11T / 7$, we get:

$$121T / 7 + 88 = 15T + 120;$$

$$T = 14 \text{ yrs.}$$

$$S = 22 \text{ yrs}$$

$$\text{Difference} = 8 \text{ yrs.}$$

So option D.

DIRECTIONS for the question: Mark the best option.

Question No. : 176

The profit earned after selling an article for Rs.998/- is the same as loss incurred after selling the article for Rs.864/-. What is the cost price of the article?

- A) Rs.978/- B) Rs.921/- C) Rs.980/- ☒ D) Rs.931/- E) None of these

Explanation:-

$$S.P = \text{Rs. } 998$$

$$P = 998 - C.P. \dots\dots\dots (1)$$

Also in second case, $S.P. = 864 \text{ Rs.}$

$$L = C.P. - 864 \dots\dots\dots (2)$$

$$\text{Given } P = L$$

Equating 1 and 2 -

$$2 \text{ C.P.} = 1862$$

$$\text{C.P.} = 931 \text{ Rs.}$$

DIRECTIONS for the question: Mark the best option.

Question No. : 177

A person has a chemical of Rs. 25 per litre. In what ratio should water be mixed with that chemical so that after selling the mixture at Rs. 20/litre he may get a profit of 25%?

- A) 13 : 16 B) 12 : 15 ☒ C) 9 : 16 D) 19 : 22 E) None of these

Explanation:-

This can be solved using alligation.

DIRECTIONS for the question: Answer on the basis of the information given below:

Question No. : 178

Arun, Barun and Kiranmala start from the same place and travel in the same direction at speeds of 30, 40 and 60 km per hour respectively. Barun starts two hours after Arun. If Barun and Kiranmala overtake Arun at the same instant, how many hours after Arun did Kiranmala start?

- A) 3 B) 3.5 ☒ C) 4 D) 4.5 E) 5

Explanation:-

Arun will cover 60 km in 2 hrs.

So Barun will take $\frac{60}{10} = 6$ hrs to meet

Arun.

So in $6 + 2 = 8$ hrs, Arun would have covered

$30 \times 8 = 240$ km in 8 hrs.

So Kiranmala will take $\frac{240}{60} = 4$ hrs to

overtake Arun.

Hence Kiranmala would start after 8

– 4 = 4 hrs after Arun.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 179

A movie was screened for 3 days -Monday, Tuesday and Wednesday. The respective ratio between the number of spectators on Monday, Tuesday and Wednesday was 2:3:5 and the price charged for three days was in the respective ratio 2 : 3 : 4. If the difference between the amount earned on Tuesday and Wednesday was Rs. 8800, what was the total amount earned in all three days?

- A) Rs. 24,800 B) Rs. 27,500 ☒ C) Rs. 26,400 D) Rs. 22,820 E) Rs. 25,200

Explanation:- Ratio of spectators = 2 : 3 : 5

Ratio of price charged = 2 : 3 : 4

Given :

The difference between the amount earned on Tuesday and Wednesday = $20x - 9x = 8800 \Rightarrow x = 800$

Therefore, total amount earned = $800 (4x + 9x + 20x) = 26400$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 180

The circumference of a circle is 10% more than the perimeter of a square. If the difference between the area of the circle and that of the square is 216 cm^2 , how much does the diagonal of the square measure? (in cm)

- A) $14\sqrt{2}$ B) 14 ☒ C) $20\sqrt{2}$ D) 28 E) 20

Explanation:- Let radius of circle be 'r' and side of the square be 'a'. Given:

$$2\pi r = 1.1 (4a)$$

$$2 \times \frac{22}{7} \times r = 4.4 a \Rightarrow r = \frac{7}{10} a$$

DIRECTIONS for the question: The question below consist of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and mark

Question No. : 181

A rectangular garden is surrounded by a path of uniform width of 2m. What is the breadth of the rectangular garden?

- I. If the length of the garden is reduced by 2m, it will become a square garden.
II. If the length of the garden is reduced by 2m, the area of the path will become $\frac{1}{4}$ times of its original area. (External boundary of the path remains constant.)

- A) if the data in statement (i) alone is sufficient to answer the question;
B) if the data in statement (ii) alone is sufficient to answer the question;
✓C) if the data in both the statements together are needed;
D) if either statement (i) alone or statement (ii) alone suffices to answer the question;
E) if even by combining both the statements the answer can not be found ;

Explanation:- Let the original length be $l+2$ and breadth be b :

From I : $l+2-2 = b \Rightarrow l = b \Rightarrow \text{area of the garden} = l^2$

From II : After reducing length by 2m $\Rightarrow$ length will be l

Total area including the path = $(l+4) \times (b+4)$

Area of path = $(l+4) \times (b+4) - (lb) = \frac{1}{4} (lb)$

By combining both the statements, we get : the length and breadth.
Therefore it can be solved by using both the statements.

DIRECTIONS for the question: The question below consist of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and mark

Question No. : 182

There are X litres of pure milk in each of the Jars A and B. What is the value of X?

- I. Ram took out 32 litres of milk from jar A and replaced it with equal quantity of water. He again took out 32 litres of new formed mixture of milk and water from same jar and replaced with equal quantity of water. As a result respective ratio of milk and water in Jar A became 16 :9.
II. Ram took out 20% of milk from jar B and added 72 litres of water. As a result percentage of water in the mixture becomes 35%.

- A) if the data in statement (i) alone is sufficient to answer the question;
B) if the data in statement (ii) alone is sufficient to answer the question;
C) if the data in both the statements together are needed;
✓D) if either statement (i) alone or statement (ii) alone suffices to answer the question;
E) if even by combining both the statements the answer can not be found;

Explanation:- From I : $\frac{16}{25} = \frac{(1-32/X)^2}{1} \Rightarrow X = 160 \text{ lts}$

From II : $0.35 (0.8X + 72) = 72 \Rightarrow X = 167 \text{ lts}$

Therefore the data in either statement (i) alone or statement (ii) alone is sufficient to answer the question.

DIRECTIONS for the question: The question below consist of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and mark

Question No. : 183

What is the speed of the boat in still water? (in kmph)

- I. The boat takes total time of 4 hours to travel 14 km upstream and 35 km downstream together.
II. The boat takes total time of 5 hours to travel 29km upstream and 24 km downstream together.

- A) if the data in statement (i) alone is sufficient to answer the question;
B) if the data in statement (ii) alone is sufficient to answer the question;
✓C) if the data in both the statements together are needed;
D) if either statement (i) alone or statement (ii) alone suffices to answer the question;
E) if even by combining both the statements the answer can not be found;

Explanation:- Let the speed of the boat be 'B' and speed the speed of the stream be 'S'

From I : $14/(B-S) + 35/(B+S) = 4$

From II : $29/(B-S) + 24/(B+S) = 5$

Using both the statements, we can find the value of speed of the boat in still water.
Therefore, both the statements are required.

DIRECTIONS for the question: The question below consist of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and mark

Question No. : 184

An article was sold after giving discount on the marked price. What was the discount percentage given?

- I. The profit earned after giving the discount is 20%. Had the percentage of discount been doubled the seller would have incurred a loss of 4%.
II. Marked price of the article is 60% above the cost price of the article.

- A) if the data in statement (i) alone is sufficient to answer the question;
B) if the data in statement (ii) alone is sufficient to answer the question;
✓C) if the data in both the statements together are needed;
D) if either statement (i) alone or statement (ii) alone suffices to answer the question;
E) if even by combining both the statements the answer can not be found;

Explanation:- Let CP = 100

=> MP = 160 & SP = 120

=> Discount = 40

D % = $(40/160) \times 100 = 25\%$

Therefore by combining the data in both the statements, we could find the discount percentage.

DIRECTIONS for the question: The question below consist of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and mark

Question No. : 185

In an election only two candidates (A & B) contested. 25% of the registered voters did not cast their votes and 250 votes cast were declared invalid. What is the number of registered voters?

I. Number of votes received by B is 1550.

II. A get 1150 votes more than B. Number of votes received by A is equal to 45% of the number of registered voters.

A) if the data in statement (i) alone is sufficient to answer the question;

B) if the data in statement (ii) alone is sufficient to answer the question;

✓C) if the data in both the statements together are needed;

D) if either statement (i) alone or statement (ii) alone suffices to answer the question;

E) if even by combining both the statements the answer can not be found;

Explanation:- From I : Votes received by B = 1550

From II : Votes received by A = 1550 + 1150 = 2700

$2700 = 0.45 \text{ (Registered votes)} \Rightarrow \text{Registered votes} = 6000$

Therefore, the data in both the statements together are needed.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 186

In river A, the distance travelled by a boat downstream in time T is 50% more than the distance travelled by the same boat upstream in the same time. In river B, the same boat travels a distance of 11km upstream in 30 minutes. If the speed of the river current in river B is 2km/h, what is the speed of the stream in river A? (The speed of the boat in still water is same in both the rivers)

A) 2km/h B) 4km/h C) 4.5 km/h D) 5.2 km/h ✓E) None of these

Explanation:- Let downstream distance = D_d , Upstream distance = D_u , Speed of stream = S & Speed of boat = B

River B : $11/(B-2) = 30/60 \Rightarrow B = 24\text{k/h}$

River A : $D_d = 1.5D_u$

$1.5D_u / (24+S) = D_u / (24-S)$

Solving we get $S = 4.8\text{k/h}$

DIRECTIONS for the question: Study the given information carefully to answer the given question.

Question No. : 187

$$\left(\frac{x^2}{4}\right) + x + \left(\frac{3}{4}\right) = 0$$

$$y^2 + 6y + 9 = 0$$

Quantity I: x

Quantity II: y

- A) Quantity I = Quantity II B) Quantity I < Quantity II C) Quantity I > Quantity II ✓D) Quantity I ≥ Quantity II
E) Quantity I ≤ Quantity II

Explanation:- $\left(\frac{x^2}{4}\right) + x + \left(\frac{3}{4}\right) = 0$

$$x^2 + 4x + 3 = 0$$

$$x^2 + 3x + x + 3 = 0$$

$$x(x+3) + 1(x+3) = 0$$

$$(x+1)(x+3) = 0 \Rightarrow x = -1, -3$$

$$y^2 + 6y + 9 = 0$$

$$y^2 + 3y + 3y + 9 = 0$$

$$y(y+3) + 3(y+3) = 0$$

$$(y+3)(y+3) = 0 \Rightarrow y = -3, -3$$

Therefore, $x \geq y$

DIRECTIONS for the question: Study the given information carefully to answer the given question.

Question No. : 188

M is an integer selected at random from the set {7, 13, 24, 27, 33, 19 & 21}

Quantity I: Probability that the average of 11, 8 and M is of least 15.

Quantity II: $\frac{1}{3} M$

- A) Quantity I < Quantity II
B) Quantity I = Quantity II or the relationship cannot be established from the information that I given
C) Quantity I ≤ Quantity II ✓D) Quantity I > Quantity II E) Quantity ≥ Quantity II

Explanation:- Quantity I : $(11+8+M) / 3 \geq 15$

$$19+M \geq 45 \Rightarrow M \geq 26$$

Therefore, M can be 27 or 33

Quantity II : $\frac{1}{3} M \Rightarrow$ As it is 1/3rd of the given values, it will be always less than Quantity I

DIRECTIONS for the question: The question consist of two quantities, one in Column A and the other in Column B. Mark answer as

Question No. : 189

Sum of first 5 terms of an arithmetic progression (AP) is 65. The respective ratio of the 8th and 15th term is 4 : 7.

I. 4th term of the AP. II.

II. 16

✓A) Quantity I < Quantity II

B) Quantity I = Quantity II or the relationship cannot be established from the information that I given

C) Quantity I < Quantity II D) Quantity I ≤ Quantity II E) Quantity I ≥ Quantity II

Explanation:- Let AP series is: $a, a+d, a+2d, a+3d, a+4d$

Sum of first 5 terms of an arithmetic progression (AP) is 65.

$$a + a+d+a+2d+a+3d+ a+4d=65$$

$$5a+10d=65$$

$$a+2d=13 \dots i$$

The respective ratio of the 8th and 15th term is 4 : 7.

$$8\text{th term} = a+7d$$

$$15\text{th term} = a+14d$$

$$(a+7d)/(a+14d)=4/7$$

$$3a=7d$$

$$a=7/3 d \dots ii$$

from i & ii

$$d=3, \text{ and } a= 7$$

therefore, series will be 7, 10, 13, 16, 19.

DIRECTIONS for the question: Study the given information carefully to answer the given question.

Question No. : 190

$$ab < 0$$

Quantity I: $a - b$

Quantity II: a/b

A) Quantity I < Quantity II

B) Quantity I = Quantity II or the relationship cannot be established from the information that I given

C) Quantity I ≤ Quantity II ✓D) Quantity I > Quantity II E) Quantity I ≥ Quantity II

Explanation:- $ab < 0 \Rightarrow$ one value is +ve and other is -ve

$$\text{Let } a = 1 \text{ \& } b = -1$$

$$\text{Quantity I : } 1 - (-1) = 2$$

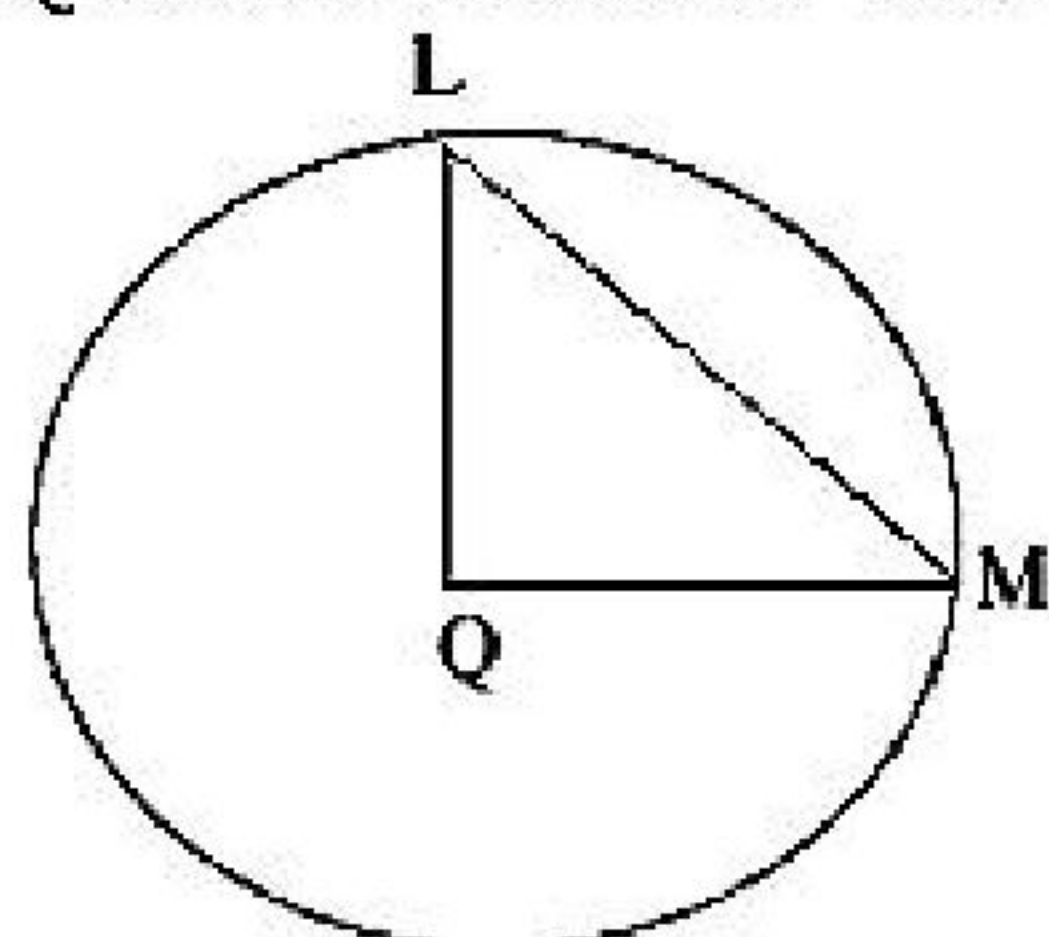
$$\text{Quantity II : } 1/-1 = -1$$

Therefore whatever the values, Quantity I will always be greater than Quantity II.

DIRECTIONS for the question: In the following question two equations numbered I and II are given. Solve and mark your answer as

Question No. : 191

Q is the centre of the circle and length of LM is 6 cm. (figure into the scale)



Quantity I: The area of the circle

Quantity II: $36\pi \text{ cm}^2$

- ✓A) Quantity I < Quantity II
 B) Quantity I = Quantity II or the relationship cannot be established from the information that I given
 C) Quantity I $\leq$ Quantity II D) Quantity I > Quantity II E) Quantity $\geq$ Quantity II

Explanation:- Relationship cannot be established from the information that I given as LQ and QM are not given to be perpendicular. so , we can't find the radius.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 192

12 men can complete a project in 8 days. For the first two days, all 12 men reported for work but on the third and fourth days 2 men did not report for work. If in the following days, all 10 men reported for work, in total how many days the whole project was completed?

- A) $8\frac{1}{2}$ B) $7\frac{1}{2}$ ✓C) $9\frac{1}{5}$ D) $8\frac{1}{2}$ E) 4

Explanation:- Total men days = $9\text{men} \times 8\text{ days} = 96\text{men days}$

ATQ,

12 men wokred for 2 days = 24 men days

and 10 men wokred for 2 days more = $10 \times 2 = 20\text{ men days}$.

Now, $96 - 24 - 20 = 52\text{ mendays}$ are left to be done by 10 remianing men in $52/10 = 5\frac{1}{5}\text{ days}$

Hence, total number of days will be = $5\frac{1}{5} + 2 + 2 = 9\frac{1}{5}\text{days}$

DIRECTIONS for the question: In the following series, one of the terms given is **wrong**. Find that term and mark that as your answer.

Question No. : 193

13 6 8 13.5 29 75 228

- A) 75 B) 29 C) 13.5 ✓D) 6 E) 8

Explanation:- 13 6 8 13.5 29 75 228

$13/2 + .5 = 7$

$7 \times 1 + 1 = 8$

$8 \times 1.5 + 1.5 = 13.5$

$13.5 \times 2 + 2 = 29$

$29 \times 2.5 + 2.5 = 75$

DIRECTIONS for the question: In the following series, one of the terms given is **wrong**. Find that term and mark that as your answer.

Question No. : 194

16.3 14.5 18.2 12.5 20.1 10.6 22

✓A) 10.6 B) 20.1 C) 14.5 D) 12.5 E) 18.2

Explanation:- This is the case of dual series. series are given below:

1st series :16.3 18.2 20.1 22

In this , -1.9, -1.9 ... pattern is follows.

&

2nd series: 14.5 12.5 10.6

In this , -2, -2, -2 is follows. therefore $12.5 - 2 = 10.5$. hence, 10.6 is the wrong number in th series.

DIRECTIONS for the question: In the following series, one of the terms given is **wrong**. Find that term and mark that as your answer.

Question No. : 195

43 45 55 85 153 290 505

A) 55 B) 45 C) 153 D) 85 ✓E) 290

Explanation:-

43	45	55	85	153	290	505
45-43=2	55-45=10	85-55=30	153-85=68	290-153=137	505-290=215	
$2^3+2=8$	$3^3+3=30$	$4^3+4=68$	$5^3+5=130$	$6^3+6=222$		

hence, 6th term(290) is wrong, it should be 283.

DIRECTIONS for the question: In the following series, one of the terms given is **wrong**. Find that term and mark that as your answer.

Question No. : 196

6 5 8 21 80 415 2364

✓A) 415 B) 8 C) 80 D) 21 E) 5

Explanation:- The logic applied here is

*1 - 1, *2 - 2, *3 - 3 and so on. When 80 is multiplied by 5 and then 5 is subtracted, it should be 395, given is 415, which is wrong and hence is the answer.

DIRECTIONS for the question: In the following series, one of the terms given is **wrong**. Find that term and mark that as your answer.

Question No. : 197

324 164 84 44 46 14 9

✓A) 324 B) 164 C) 84 D) 44 E) 46

DIRECTIONS for the question: In the following series, one of the terms given is **wrong**. Find that term and mark that as your answer.

Question No. : 198

3 5 12 38 154 782 4634

✓A) 782 B) 12 C) 5 D) 154 E) 38

Explanation:- The logic applied here is $*1 + 2$, $*2 + 2$, $*3 + 2$, $*4 + 2$ and so on.

In this case $154 * 5 = 770 + 2 = 772$. But given here is 782, which is wrong and hence is the answer.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 199

Ten years hence, the respective ratio between Simmi's age and Niti's age will be 7 : 9. Two years ago, the respective ratio between Simmi's age and Niti's age was 1: 3. If Abhay is 4 years older to Simmi, what is Abhay's present age? (in years)

✓A) 8 B) 4 C) 16 D) 20 E) 12

Explanation:- Let their ages 10 years hence be $7x$ and $9x$. Now the question states 2 years ago, that means 12 years before the time the first ages are mentioned. Then the equation would be

$(7x - 12)/(9x - 12) = 1/3$. Solving this you get the value of x as 2. This means the ages after 10 years are 14 and 18. The present ages are thus 4 and 8 years. Abhey is 4 years older than Simmi, thus Ajay's age would be $4 + 4 = 8$ years.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 200

The sum of two numbers is 36. What is their maximum possible product?

✓A) 324 B) 320 C) 240 D) 180 E) 175

Explanation:- The product is maximum, when the number is divided into two equal parts. Thus $18 * 18 = 324$. First option is the answer.