

A children's gift store sells gift certificates in denominations of \$3 and \$5. The store sold 'm' \$3 certificates and 'n' \$5 certificates worth \$93 on a Saturday afternoon. If 'm' and 'n' are natural numbers, how many different values can 'm' take?

- A. 5
- B. 7
- C. 6
- D. 31
- E. 18

What is the highest integral value of 'k' for which the quadratic equation $x^2 - 6x + k = 0$ will have two real and distinct roots?

- A. 9
- B. 7
- C. 3
- D. 8
- E. 12

If one of the roots of the quadratic equation $x^2 + mx + 24 = 0$ is 1.5, then what is the value of m?

- A. -22.5
- B. 16
- C. -10.5
- D. -17.5
- E. Cannot be determined

For what value of 'm' will the quadratic equation $x^2 - mx + 4 = 0$ have real and equal roots?

- A. 16
- B. 8
- C. 2
- D. -4
- E. Choice (B) and (C)

$y = x^2 + bx + 256$ cuts the x axis at $(h, 0)$ and $(k, 0)$. If h and k are integers, what is the least value of b?

- A. -32
- B. -256
- C. -255
- D. -257
- E. 0

$x^2 + bx + 72 = 0$ has two distinct integer roots; how many values are possible for 'b'?

- A. 3
- B. 12
- C. 6
- D. 24
- E. 8

If $x > 0$, how many integer values of (x, y) will satisfy the equation $5x + 4|y| = 55$?

- A. 3
- B. 6

- C. 5
- D. 4
- E. Infinitely many

If the curve described by the equation $y = x^2 + bx + c$ cuts the x-axis at -4 and y axis at 4, at which other point does it cut the x-axis?

- A. -1
- B. 4
- C. 1
- D. -4
- E. 0