



spardhaguru2022



Spardhaguru Current affairs



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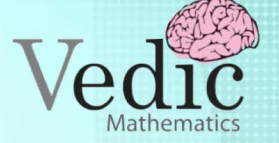
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1) I. $x^2 + 9x + 20 = 0$,
II. $y^2 + 5y + 6 = 0$ to solve both the equations to find the values of x and y?

- a) If $x < y$ b) If $x > y$
c) If $x \leq y$ d) If $x \geq y$

2) I. $x^2 - x - 42 = 0$,
II. $y^2 - 17y + 72 = 0$ to solve both the equations to find the values of x and y?

- a) If $x < y$ b) If $x > y$
c) If $x \leq y$ d) If $x \geq y$

3) I. $x^2 + 5x + 6 = 0$,
II. $y^2 + 9y + 14 = 0$ to solve both the equations to find the values of x and y?

- a) If $x < y$
b) If $x > y$
c) If $x \leq y$
d) If $x = y$ or the relationship between x and y cannot be established.

4) (i). $a^2 + 11a + 30 = 0$,
(ii). $b^2 + 6b + 5 = 0$ to solve both the equations to find the values of a and b?

- a) If $a < b$
b) If $a \leq b$
c) If the relationship between a and b cannot be established
d) If $a > b$

5) (i). $a^2 - 9a + 20 = 0$,
(ii). $2b^2 - 5b - 12 = 0$ to solve both the equations to find the values of a and b?

- a) If $a < b$
b) If $a \leq b$
c) If the relationship between a and b cannot be established
d) If $a \geq b$

6) (i). $a^2 - 7a + 12 = 0$,
(ii). $b^2 - 3b + 2 = 0$ to solve both the equations to find the values of a and b?

- a) if $a < b$
b) if $a \leq b$
c) if the relationship between a and b cannot be established.
d) if $a > b$

7) A man could buy a certain number of notebooks for Rs.300. If each notebook cost is Rs.5 more, he could have bought 10 notebooks less for the same amount. Find the price of each notebook?

- a) 10 b) 8
c) 15 d) 7.50

8) Find the quadratic equations whose roots are the reciprocals of the roots of $2x^2 + 5x + 3 = 0$?

- a) $3x^2 + 5x - 2 = 0$
b) $3x^2 + 5x + 2 = 0$
c) $3x^2 - 5x + 2 = 0$





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d) $3x^2 - 5x - 2 = 0$

9) Find the value of $a/b + b/a$, if a and b are the roots of the quadratic equation $x^2 + 8x + 4 = 0$?

- a) 15 b) 14
c) 24 d) 26

10) If a and b are the roots of the equation $x^2 - 9x + 20 = 0$, find the value of $a^2 + b^2 + ab$?

- a) -21 b) 1
c) 61 d) 21

11) The sum of the square of the three consecutive even natural numbers is 1460. Find the numbers?

- a) 18, 20, 22 b) 20, 22, 24
c) 22, 24, 26 d) 24, 26, 28

12) One root of the quadratic equation $x^2 - 12x + a = 0$, is thrice the other. Find the value of a ?

- a) 29 b) 27
c) 28 d) 7

13) The sum of the squares of two consecutive positive integers exceeds their product by 91. Find the integers?

- a) 9, 10 b) 10, 11
c) 11, 12 d) 12, 13

14) If the roots of the equation $2x^2 - 5x + b = 0$ are in the ratio of 2:3, then find the value of b ?

- a) 3 b) 4
c) 5 d) 6

15) The sum and the product of the roots of the quadratic equation $x^2 + 20x + 3 = 0$ are?

- a) 10, 3 b) -10, 3
c) -20, 3 d) -10, -3

16) If the roots of a quadratic equation are 20 and -7, then find the equation?

- a) $x^2 + 13x - 140 = 0$
b) $x^2 - 13x + 140 = 0$
c) $x^2 - 13x - 140 = 0$
d) $x^2 + 13x + 140 = 0$

17) The roots of the equation $3x^2 - 12x + 10 = 0$ are?

- a) rational and unequal
b) complex
c) real and equal
d) irrational and unequal

18) Find the roots of the quadratic equation: $2x^2 + 3x - 9 = 0$?

- a) 3, -3/2 b) 3/2, -3
c) -3/2, -3 d) 3/2, 3





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19) Find the roots of the quadratic equation: $x^2 + 2x - 15 = 0$?

- a) -5, 3 b) 3, 5
c) -3, 5 d) -3, -5

20) If α and β are the roots of the equation $x^2 - 6x + 6 = 0$, what is $\alpha^3 + \beta^3 + \alpha^2 + \beta^2 + \alpha + \beta$ equal to ?

- a) 138 b) 138
c) 124 d) 150

21) If one root of $px^2 + qx + r = 0$ is double of the other root, then which one of the following is correct ?

- a) $4q^2 = 9r$ b) $2q^2 = 9p$
c) $9q^2 = 2pr$ d) $2q^2 = 9pr$

22) The value of y which will satisfy the equations $2x^2 + 6x + 5y + 1$ and $2x + y + 3 = 0$ may be found by solving which one of the following equations ?

- a) $y^2 + 10y - 7 = 0$
b) $y^2 + 8y + 1 = 0$
c) $y^2 - 8y + 7 = 0$
d) $y^2 + 14y - 7 = 0$

23) If one root of the equation $\frac{x^2}{a} + \frac{x}{b} + \frac{1}{c} = 0$ is reciprocal of the other, then which one of the following is correct ?

- a) $ac = 1$ b) $b = c$
c) $a = c$ d) $a = b$

24) If $(2x - 3y < 7)$ and $(x + 6y < 11)$, then which one of the following is correct ?

- a) $x + y \leq 5$ b) $x + y < 6$
c) $x + y \leq 6$ d) $x + y < 5$

25) What is the condition that the equation $ax^2 + bx + c = 0$, where $a \neq 0$ has both the roots positive ?

- a) b and c have the same sign opposite to that of a .
b) a and b are of same sign.
c) a and c have the same sign opposite to that of b .
d) a , b and c are of same sign.

26) Two numbers p and q are such that the quadratic equation $px^2 + 3x + 2q = 0$ has -6 as the sum and the product of the roots. What is the value of $(p - q)$?

- a) 2 b) 1
c) 3 d) -1

27) The quadratic equation whose roots are 3 and -1, is

- a) $x^2 + 2x - 3 = 0$
b) $x^2 - 2x - 3 = 0$
c) $x^2 + 4x + 3 = 0$
d) $x^2 - 4x + 3 = 0$





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28) If $x + y = 5$, $y + z = 10$ and $z + x = 15$, then which one of the following is correct?

- a) $x > y > z$ b) $z > y > x$
c) $x > z > y$ d) $z > x > y$

29) Which one of the following is one of the two consecutive positive integers, the sum of whose squares is 761 ?

- a) 24 b) 20
c) 25 d) 15

30) The roots of the quadratic equation $6x^2 - x - 2 = 0$ are

- a) $\frac{2}{3}, \frac{1}{2}$ b) $-\frac{2}{3}, \frac{1}{2}$
c) $\frac{2}{3}, -\frac{1}{2}$ d) $-\frac{2}{3}, -\frac{1}{2}$

