



Section - A (1 x 8 = 8 marks)

1. What is the common difference of A.P, if its n th term is $7n-1$?
2. Find distance AB, if the co-ordinates of A = (2, 2) and B = (-1, -2).
3. Find the 17th term from the last term of the A.P 1, 6, 11,, 211, 216.
4. For what values of k the consecutive terms $2k+1$, $3k+3$ and $5k-1$ are in A.P.
5. ABCD is a rectangle whose 3 vertices are B (4, 0) C (4, 3) and D (0, 3). Calculate the length of one of its diagonals.
6. Find the value of k so that the quadratic equation $x^2 - 4kx + k = 0$ has equal roots.
7. If the sum of zeros of a polynomial $(k^2 - 14)x^2 - 2x - 12 = 0$ is 1, then find the value of k.
8. Find the roots of the quadratic equation $2x^2 - x - 6 = 0$ by factorisation method.

Section - B (6 x 2 = 12 marks)

9. Find the sum of first 25 terms of the A.P whose n th term is given by $a_n = 2 - 3n$.
10. Find the roots of Quadratic Equation $\sqrt{2}x^2 + 7x + 5\sqrt{2} = 0$.
11. If P and Q are the points of trisection of the line segment joining the points A (2,-2) and B (-7, 4) such that P is nearer to A. Find the co-ordinates of P and Q.
12. The x co-ordinate of a point P is twice its y co-ordinate. If P is equidistant from Q(2,-5) and R(-3, 6). Find the co-ordinates of P.
13. Find two numbers whose sum is 27 and product is 182.
14. Draw a line segment AB = 12cm and divide it in the ratio 3:5.

Section - C (3 x 4 = 12 marks)

15. 14th term of an A.P is twice its 8th term. If its 6th term is -8 find the sum of first 20 terms.
16. Draw a pair of tangents to a circle of radius 5cm which is inclined to each other at an angle of 60° .
17. If a and b are the zeros of the polynomial $6y^2 - 7y + 2$. Find a quadratic polynomial whose zeros are $\frac{1}{a}$ and $\frac{1}{b}$.
18. The three vertices of a rhombus, taken in order are (2,-1), (3, 4) and (-2, 3). Find the fourth vertex.

Section - D (4 x 2 = 8 marks)

19. Construct a triangle with sides 5cm, 4cm and 6cm. Construct another triangle similar to it whose sides are $\frac{2}{3}$ times of the sides of the first triangle.

20. The sum of first 14 terms of an A.P is 1505 and its first term is 10. Find its 25th term.

-x-x-x-x-x-x-