

SUBJECT- MATHEMATICS,CLASS-X
CHAPTER-2(POLYNOMIAL)
WORKSHEET (ADVANCE)

TIME-45 MINS

MAXIMUM MARKS-20

Choose the correct option. (2X1=2)

- 1-If one of the zeroes of a quadratic polynomial of the form $x^2 + ax + b$ is the negative of the other, then which of the following is correct?
- (a) Polynomial has linear factors
 - (b) Constant term of the polynomial is negative
 - (c) Both (a) and (b) are correct.
 - (d) Neither (a) and (b) are correct.
- 2-The zeroes of the quadratic polynomial $x^2 + kx + k, k \neq 0$
- (a) can not be both positive
 - (b) can not be both negative
 - (c) are always unequal
 - (d) are always equal

Fill in the blanks: (2X1=2)

- 3: The zero of the zero polynomial is -----.
- 4: The degree of the zero polynomial is -----.

Answer the following: (2X1=2)

- 5: If on division of a polynomial $p(x)$ by polynomial $g(x)$, the quotient is zero, what is the relation between the degree of $p(x)$ and $g(x)$?
- 6: If the parabola of a quadratic polynomial $p(x)$ touches the x axis at exactly one point then what is the relation between the zeroes.?

Short Answer Type Questions-I: (2X2=4)

- 7: Can $(x-1)$ be the remainder on division of a polynomial $p(x)$ by $(2x+3)$? Justify your answer.
- 8: If the zeroes of the polynomial $x^2 + bx - k$, are equal in magnitude but opposite in sign, then find the zeroes.

Short Answer Type Questions-II: (2X3=6)

9: If the zeroes of the polynomial $x^3 - 3x^2 + x + 1$ are $(a-b)$, 'a' and $(a+b)$ then find a and b.

10: If two zeroes of the polynomial $2x^4 - 9x^3 + 5x^2 + 3x - 1$ are $2 + \sqrt{3}$, and $2 - \sqrt{3}$, then find other zeroes.

Long Answer Type Question(1X4=4)

11: For what value of a and b are the zeroes of $q(x) = x^3 + 2x^2 + a$ also the zeroes of the polynomial $p(x) = x^5 - x^4 - 4x^3 + 3x^2 + 3x + b$? Which zeroes of $p(x)$ are not the zeroes of $q(x)$?

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