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(Affiliated to CBSE up to +2 Level)

Class10th

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Sub.: Mathematics

Maths Work Sheet

Class - X

Chapter:- Polynomials

Q01 : Find the Zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the coefficients:-

- a) $5x^2 - 29x + 20$
- b) $2\sqrt{2}x^2 - 9x + 5\sqrt{2}$
- c) $3\sqrt{3}x^2 - 19x + 10\sqrt{3}$
- d) $x^2 - x - 72$
- e) $x^2 - 2$
- f) $x^2 - 5x$
- g) $x^2 - 9$

Q02 : Form the Quadratic polynomials whose zeros are:-

- a) $3 \pm \sqrt{2}$
- b) $-\sqrt{2}$ and $\sqrt{2}$
- c) $\frac{1}{3}$ and $\frac{1}{4}$
- d) -5 and -3
- e) 3 and $\frac{1}{5}$
- f) $\frac{1}{a}, \frac{1}{b}$

Q03 : Find all the Zeroes of $x^3 + 6x^2 + 11x + 6$ if $(x + 1)$ is a factor.

Q04 : Find all the Zeroes of $x^3 - 10x^2 + 31x - 30$ if 2 is a zero of it.

Q05 : Find the values of a and b , if 2 and 3 are zeroes of $x^3 + ax^2 + bx - 30$.

Q06 : Divide $x^4 - 4x^3 + 8x^2 + 7x + 10$ by $(x - 2)$ and verify the division algorithm.

Q07 : Find the value of k if $(x - 2)$ is a factor of $x^2 - kx + 10$.

Q08 : Find the value of k if 2 is zero of $3x^2 - 17x + k$.

Q09 : Find all the zeroes of $4x^4 - 20x^3 + 23x^2 + 5x - 6$ if two of its zeroes are 2 & 3.

Q10 : If α and β are the zeroes of $x^2 + 5x + 6$ find the value of $\alpha^{-1} + \beta^{-1}$.

Q11 : If $\frac{1}{2}$ and 1 are zeroes of $2x^4 - 3x^3 - 3x^2 + 6x - 2$, find the other zeroes.

Q12 : If -5 and 7 are zeroes of $x^4 - 6x^3 - 26x^2 + 138x - 35$ find the other zeroes.