

Activity Worksheet

Challenging brain

Sub : Mathematics

Grade: X

Date:

Name:

ID No.....

State whether the following statements are true or false. Justify your answer.

i. If the zeroes of a quadratic polynomial $ax^2 + bx + c$ are both positive, then a, b and c all have the same sign.

Sol.

ii. The quotient and remainder on division of $2x^2 + 3x + 4$ by $x^2 + 1$ are 0 and $2x^2 + 3x + 4$ respectively.

Sol.

i. Find the zeroes of the polynomial $2x^2 + (1 + 2\sqrt{2})x + \sqrt{2}$ and verify the relation between the co-efficients and the zeroes of the polynomial.

Sol.

ii. On dividing $8x^2 + 2x^2 - 14x + 9$ by a polynomial $g(x)$, the quotient and remainder were $(-2x + 1)$ and $(x + 3)$ respectively. Find $g(x)$

Sol.

iii. If the remainder on division of $x^3 - 2x^2 + kx + 5$ by $x - 2$ is 11, find the quotient and the value of k . Hence find the zeroes of the cubic polynomial $x^3 - 2x^2 + kx - 6$.

Sol.

iv. Given that the zeroes of the cubic polynomial $x^3 - 6x^2 + 3x + 10$ are of the form a , $a + b$, $a + 2b$ for some real numbers a and b , find the values of a and b as well as the zeroes of the given polynomial.

Sol.
