

**X MATHEMATICS, POLYNOMIALS, WS 1**

1) If  $p(x) = 3x^3 - 2x^2 + 6x - 5$ , find  $p(2)$ .

2) Find the quadratic polynomial whose zeroes are  $2 + \sqrt{3}$  and  $2 - \sqrt{3}$ .

3) Find the zeroes of the polynomial  $mx^2 + (m + n)x + n$ .

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

5) Find all the zeroes of the polynomial  $2x^3 - x^2 - 5x - 2$ , if two of its zeroes are -1 and 2.

6) If the product of zeroes of the polynomial  $ax^2 - 6x - 6$  is 4, find the value of ' $a$ '.

7) Find a polynomial whose zeroes are 2 and -3.

8) Find the zeroes of the quadratic polynomial  $6x^2 - 7x - 3$ , and verify the relationship between the zeroes and the co-efficients.

9) If one zero of the quadratic polynomial  $x^2 + 3x + k$  is 2, find the value of  $k$ .

10) If  $\alpha$  and  $\beta$  are zeroes of the quadratic polynomial  $x^2 - (k + 6)x + 2(2k - 1)$ . Find the value of  $k$  if  $\alpha + \beta = \frac{1}{2} \alpha \beta$ .

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