

**CLASS –X**

**Maths**

**Date:-23/04/2020**

**CHAPTER 2 –POLYNOMIALS**

- Watch the online videos “POLYNOMIALS -Lecture 1” from Optimum Online E-Learning Platform and try to comprehend the concepts of Zeroes of quadratic polynomials & its relationship with their coefficients. After that try to solve the questions given in your assignment.
- Lecture No. 01 , watch the last 20 minutes of video
- Lecture No. 02
- Lecture No. 03, this video contains the solution of assignment.

**1. Find the zeros of each of the following quadratic polynomials and verify the relationship between the zeros and their coefficients:**

(i)  $f(x) = x^2 - 2x - 8$

(ii)  $g(s) = 4s^2 - 4s + 1$

(iii)  $h(t) = t^2 - 15$

(iv)  $f(x) = 6x^2 - 3 - 7x$

(v)  $p(x) = x^2 + 2\sqrt{2}x - 6$

**2. For each of the following, find a quadratic polynomial whose sum and product respectively of the zeros are as given. Also, find the zeros of these polynomials by factorization.**

(i)  $-8/3, 4/3$

(ii)  $21/8, 5/16$

(iii)  $-2\sqrt{3}, -9$

(iv)  $-3/2\sqrt{5}, -1/2$

**3. If  $\alpha$  and  $\beta$  are the zeros of the quadratic polynomial  $f(x) = x^2 - 5x + 4$ , find the value of  $1/\alpha + 1/\beta - 2\alpha\beta$ .**

**4. If  $\alpha$  and  $\beta$  are the zeros of the quadratic polynomial  $p(y) = 5y^2 - 7y + 1$ , find the value of  $1/\alpha + 1/\beta$ .**

5. If  $\alpha$  and  $\beta$  are the zeros of the quadratic polynomial  $f(x) = x^2 - x - 4$ , find the value of  $1/\alpha + 1/\beta - \alpha\beta$ .

6. If  $\alpha$  and  $\beta$  are the zeroes of the quadratic polynomial  $f(x) = x^2 + x - 2$ , find the value of  $1/\alpha - 1/\beta$ .

7. If one of the zero of the quadratic polynomial  $f(x) = 4x^2 - 8kx - 9$  is negative of 2 the other, then find the value of  $k$ .

8. If the sum of the zeroes of the quadratic polynomial  $f(t) = kt^2 + 2t + 3k$  is equal to 2 their product, then find the value of  $k$ .

9. If  $\alpha$  and  $\beta$  are the zeros of the quadratic polynomial  $p(x) = 4x^2 - 5x - 1$ , find the value of  $\alpha^2\beta + \alpha\beta^2$ .

10. If  $\alpha$  and  $\beta$  are the zeros of the quadratic polynomial  $f(t) = t^2 - 4t + 3$ , find the value of  $\alpha^4\beta^3 + \alpha^3\beta^4$ .

\*\*Link of Optimum Online E-Learning Platform:- [www.optimumschool.net/online](http://www.optimumschool.net/online)  
In case of any query call at +91-9818033213

OPTIMUM  
INTERNATIONAL SCHOOL