

**Delhi Public School, Jammu**  
**April, 2025**  
**Assignment-2**

**Class:-X**

**Sub:- Mathematics**

**Topic:- Polynomials (Ch-2)**

1. Find degrees and zeroes of polynomial:-  
(i)  $2x + 3$ . (ii)  $100x^2 - 81$ . (iii)  $4x^2 - 7$ . (iv)  $6x^2 - 3 - 7x$
2. Find number of zeroes from given graph of  
(i)  $x - 3$ . (ii)  $x^2 + 1$
3. Find zeroes and verify relation between coefficient and zeroes:-  
(i)  $6x^2 - 3 - 7x$  (ii)  $x^2 - 2x - 8$  (iii)  $6x^2 + x - 12$
4. Find quadratic polynomial whose sum and product respectively of zeroes are:-  
(i)  $\sqrt{2}$  and  $\frac{1}{3}$  (ii)  $0, \sqrt{5}$  (iii)  $4, \frac{1}{4}c$
5. If  $\alpha$  and  $\beta$  are zeroes of polynomials  $f(x) = x^2 + 3x - 1$   
(i)  $\alpha^2 + \beta^2$  (ii)  $\alpha^3 + \beta^3$  (iii)  $\alpha^3\beta + \beta^3\alpha$
6. If  $\alpha$  and  $\beta$  are zeroes of polynomials  $f(x) = x^2 + kx - 1$  such that sum of zeroes is equal to product of zeroes, find  $k$
7. If one zero of polynomial  $3x^2 + kx - 1$  is equal and opposite to other, find  $k$ .
8. Find quadratic polynomial whose zeroes are  
(i)  $\frac{2}{3}$  and  $\frac{3}{4}$  (ii)  $2\sqrt{3}$  and  $5\sqrt{3}$ . (iii)  $2 + \sqrt{5}$  and  $2 - \sqrt{5}$
9. If  $\alpha$  and  $\beta$  are zeroes of polynomials  $f(x) = x^2 - p(x+1) - c$ , show that  $(\alpha + 1)(\beta + 1) = 1 + c$
10. Find  $K$  if  $p(x) = Kx + 2$ ; and  $x = 2$  is zero of  $p(x)$ .