

## Class 10 Mathematics - Polynomials

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Advanced Worksheet 2

#### Questions

1. Find a quadratic polynomial whose zeroes are 2 and 5.
2. Find a quadratic polynomial whose zeroes are -3 and 4.
3. Form a quadratic polynomial whose sum of zeroes is 7 and product is 12.
4. Form a quadratic polynomial whose sum of zeroes is -2 and product is -15.
5. If the zeroes of a polynomial are  $\alpha$  and  $\beta$ , write the quadratic polynomial in terms of  $\alpha$  and  $\beta$ .
6. Form a quadratic polynomial whose zeroes are  $1/2$  and 3.

#### Answer Key

1.

$$\text{Polynomial} = x^2 - (2+5)x + (2 \times 5)$$

$$= x^2 - 7x + 10$$

2.

$$\text{Polynomial} = x^2 - (-3+4)x + (-3 \times 4)$$

$$= x^2 - x - 12$$

3.

$$\text{Polynomial} = x^2 - 7x + 12$$

4.

$$\text{Polynomial} = x^2 + 2x - 15$$

5.

$$x^2 - (\alpha + \beta)x + \alpha\beta$$

6.

$$\text{Polynomial} = x^2 - (7/2)x + 3/2$$

Multiplying by 2:

$$2x^2 - 7x + 3$$

