

Class 10 Mathematics - Polynomials

Name: _____

Date: _____

Advanced Worksheet 3

Questions

1. Verify the relationship between zeroes and coefficients for:
 $x^2 - 8x + 15$
2. Verify the relationship between zeroes and coefficients for:
 $x^2 + x - 6$
3. Verify the relationship between zeroes and coefficients for:
 $2x^2 - 5x - 3$
4. The sum of the zeroes of a quadratic polynomial is 6 and their product is 8. Find the polynomial.
5. The sum of the zeroes is -4 and the product is 3. Find the polynomial.
6. Why is it possible to form a quadratic polynomial when the sum and product of its zeroes are known?

Answer Key

1.

Zeroes = 3, 5

Sum = 8

Product = 15

Verified

2.

Zeroes = 2, -3

Sum = -1

Product = -6

Verified

3.

Zeroes = 3, -1/2

Sum = 5/2

Product = -3/2

Verified

4.

$x^2 - 6x + 8$

5.

$x^2 + 4x + 3$

6.

Because a quadratic polynomial is completely determined by:

$x^2 - (\text{sum})x + \text{product}$