Quadratic Equations

Practice Worksheet 4

Exercise 1 Maximum Score: 10

Difficulty Level: easy, Learning Targets: 1, 2

Solve the following quadratic equation by factoring:

$$x^2 - 5x + 6 = 0.$$

[Chapter 4, Section 2]

Exercise 2 Maximum Score: 15

Difficulty Level: medium, Learning Targets: 2, 3

Solve the following quadratic equation using the quadratic formula, and give your answer to two decimal places:

$$2x^2 + 3x - 7 = 0.$$

[Chapter 4, Section 3]

Exercise 3 Maximum Score: 20

Difficulty Level: hard, Learning Targets: 3, 4

A ball is thrown upward from a height of 2 m with an initial velocity of 15 m/s. Its height in metres after t seconds is given by

$$h(t) = -4.9t^2 + 15t + 2.$$

Determine, to the nearest tenth of a second, how long the ball takes to hit the ground.

[Chapter 4, Section 4]

Exercise 4 Maximum Score: 5

Difficulty Level: easy, Learning Targets: 1

Without solving it, determine the number of real solutions of

$$x^2 + 4x + 7 = 0$$

by evaluating its discriminant.

[Chapter 4, Section 1]