

14.0

3 CST items

Students solve a quadratic equation by factoring or completing the square.

Key Vocabulary

Quadratic

Factor (*n.*)

Perfect Square

Complete the Square

Zero Product Rule

Instructional Objectives

<p>1 Use guess-and-check to find one or more solutions to a quadratic equation.</p>	<p>1 If x^2 is added to x the sum is 30. What is x?</p> <p>2 Find two values of x such that $x^2 = 6x$.</p> <p>3 Find a value of x such that $x^2 + 5x = 24$.</p> <p>4 Find a value of x such that $x^2 - 8x + 12 = 0$.</p>
<p>2 Use factoring to find all solutions to a quadratic equation.</p>	<p>1 Solve for x: $x^2 - 7x = 0$</p> <p>2 Solve for x: $x^2 + 4x - 12 = 0$</p> <p>3 Solve for x: $x^2 + 8x = 20$</p> <p>4 Solve for x: $2x^2 - 10x + 12 = 0$</p>
<p>3 Use completing the square to solve quadratic equations.</p>	<p>1 Solve for x: $x^2 - 12x + 36 = 0$</p> <p>2 What quantity should be added to both sides of the equation shown to complete the square? $x^2 - 14x = 32$</p> <p>3 Complete the square to solve for x: $x^2 + 8x + 2 = 0$</p> <p>4 Brian completed the square to solve the equation: $x^2 + 6x = 16$. Which is a step in the correct solution? a) $(x + 6)^2 = 16$ b) $(x + 3)^2 = 16$ c) $(x + 6)^2 = 25$ d) $(x + 3)^2 = 25$</p>