Topic: Solving   Quadratic Formula

Level 2	Level 3	Level 4

Students will recognize or recall specific vocabulary such as: *Quadratic equation, quadratic formula*
 Students demonstrate they have developed the ability to:
 • Solve quadratic equations in one variable using:
    o Zero Product Property
    o Factoring
	Students demonstrate they have developed the ability to:
	 • Solve quadratic equations in one variable using:
	    o Quadratic Formula
	    o Taking Square Roots
		• Students will demonstrate they have developed the ability to extend their level 3 knowledge to systems with three variables.

Level 3

Watch (and take notes) the lecture called <u>Quadratic Formula</u>.

1. Find the solutions using the Quadratic Formula (QF). (*Choose 3 to complete. Do the rest for more practice.*)

    a. $2x^2 + 2x - 12 = 0$ c. $k^2 + 5k - 6 = 0$ e. $x^2 - 5x - 24 = 0$

    b. $5x^2 + 3x + 1 = 0$ d. $2a^2 - a - 13 = 0$ f. $x^2 - 3x - 3 = 0$

2. Find the solutions using the Quadratic Formula (QF). (*Choose 3 to complete. Do the rest for more practice.*)

    a. $2x^2 - x - 13 = 2$ c. $x^2 = 9x - 20$ e. $9x^2 - 11 = 6x$

    b. $2x^2 - x - 4 = 2$ d. $x^2 = -3x + 40$ f. $4x^2 - 8 = x$

Level 4 (you don't need to complete level 4 questions to turn in this assignment)

3. The border of a picture frame measures x inches. The length of the picture with the border is 40 inches, and the width of the picture with the border is 24 inches. If the area of the picture is 192 square inches, find the dimensions of the picture.