

Algebra 2 Exam III Quadratic Unit - Review Name: _____

1. Analyze the quadratics below for the critical values listed:

$$g(x) = x^2 - 9x + 20$$

$$t(x) = -4x^2 - 12x$$

y-intercept: _____

y-int: _____

axis of symmetry: _____

axis of symmetry: _____

vertex: _____

vertex: _____

x-intercept(s): _____

x-intercept(s): _____

2. Complete the square on the following equations (SHOW WORK)....

$$x^2 - 10x = -8$$

$$3x^2 - 12x = 0$$

3. Solve the following using any technique you choose:

$$(x - 6)^2 = 25$$

$$x^2 - 2x - 2 = 6$$

4. Are (2,0) and (-7,0) the x-intercepts of $g(x) = x^2 - 5x - 14$? Validate your response.

5. Carly claims that $(x - 5)$ and $(3x - 4)$ are factors of $3x^2 - 7x + 20$. Is she correct or incorrect? Justify.

Algebra 2 Exam III Quadratic Unit - Review Name: _____

6. Create a quadratic function in standard form that has x intercepts at (2,0) and (7,0). Explain your reasoning.

7. A rectangle has a length that is 7 meters longer than its width. The area of the rectangle is 330 m². Write and solve an equation to find the length and width of the rectangle.

REVIEW PROBLEMS....

8. Solve the system of equations using either substitution or elimination.
$$x - 2y = 10$$
$$4x + y = -5$$

9. Name the parent function and transformations for $t(x) = -2|x + 3| - 5$ and then SKETCH its graph.