

Chapter 4 Take-Home Quiz #7

Form G

Lessons 4-1 through 4-4

Do you know HOW?**Graph each function.**

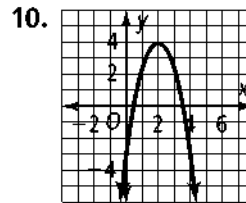
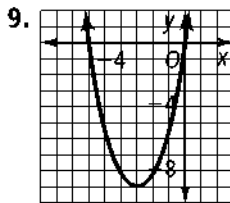
1. $y = 2x^2 - 8x + 3$

2. $y = -(x + 3)^2 + 4$

3. What are the vertex, axis of symmetry, maximum or minimum value, domain, and range of the function $y = -x^2 - 4x + 3$?4. Rewrite the equation $y = 4x^2 - 4x - 5$ in vertex form. Name the vertex and the axis of symmetry.**Write each expression in factored form.**

5. $20 - t - t^2$

6. $25w^2 + 30w + 9$

Find an equation in standard form of the parabola passing through the following points.7. $(0, -4), (1, 1), (2, 8)$ 8. $(-1, 1), (0, 5), (2, 7)$ **Write the equation in vertex form for each parabola.****Do you UNDERSTAND?**

11. **Compare and Contrast** The x -coordinate of the vertices of the parabolas $y_1 = x^2 - 3x + 1$ and $y_2 = -2x^2 + 6x - 2$ are the same. Explain why this is so and explain how the y -coordinates of the vertices are related.

12. **Error Analysis** A student says that the graph of the parabola $y = x^2 + 1001$ is “one thousand times larger” than the parabola $y = x^2 + 1$. Explain why this is not correct.