Lesson 11.2 Practice: Graphing y = ax² + bx + c

School Launch · Algebra I · Unit 11: Quadratic Functions and Equations · Worksheet A

No calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. For $y = -2x^2$: does it open up or down, and what is y at $x = -2, -1, 0, 1, 2$? EASY

2. For $y = -1x^2$: does it open up or down, and what is y at $x = -2, -1, 0, 1, 2$? EASY

3. For $y = -4x^2$: does it open up or down, and what is y at $x = -2, -1, 0, 1, 2$? EASY

4. Find the vertex and the axis of symmetry of $y = -3x^2 - 18x - 23$. MEDIUM

5. Find the vertex and the axis of symmetry of $y = x^2 + 10x + 24$. MEDIUM

6. Find the vertex and the axis of symmetry of $y = 8 - x^2$. MEDIUM

7. Find the vertex and the axis of symmetry of $y = 2x^2 + 4x + 11$. MEDIUM

8. Find the vertex and the axis of symmetry of $y = -2x^2 - 8x + 1$. HARD

9. Find the vertex and the axis of symmetry of $y = 2x^2 + 20x + 47$. HARD

10. Find the vertex and the axis of symmetry of $y = -3x^2 - 18x - 24$. HARD