Lesson 11.1 Practice: Graphing y = ax²

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

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

3. For $y = 3x^2$: 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 $y = -2x^2 - 16x - 41$. MEDIUM

5. Find the vertex and the axis of symmetry of $y = x^2 - 4x + 1$. MEDIUM

6. Find the vertex and the axis of symmetry of $y = 3x^2 - 30x + 77$. MEDIUM

7. Find the vertex and the axis of symmetry of $y = -2x^2 - 16x - 26$. MEDIUM

8. Find the vertex and the axis of symmetry of $y = 3x^2 + 18x + 32$. HARD

9. Find the vertex and the axis of symmetry of $y = 3x^2 - 18x + 26$. HARD

10. Find the vertex and the axis of symmetry of $y = x^2 - 10x + 20$. HARD