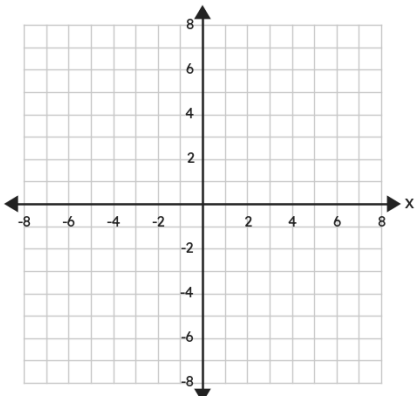
Name: _____ Date: _____

Fresh Math

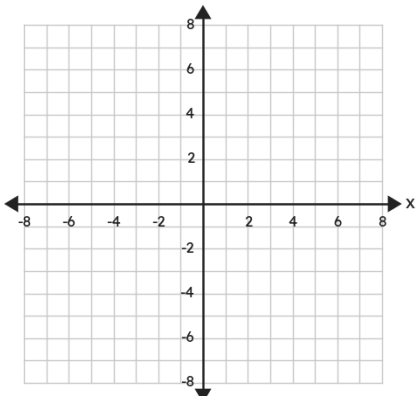
Graphing Functions - Medium

Graph each function on the grid. For a quadratic, give the vertex, axis of symmetry, and y-intercept; for an absolute value function, the vertex; for a square root function, the starting point.

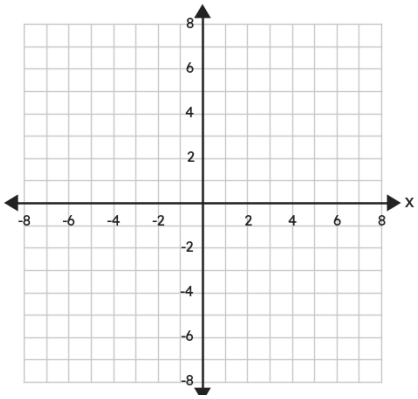
1. $y = -x^2 + 6x - 7$



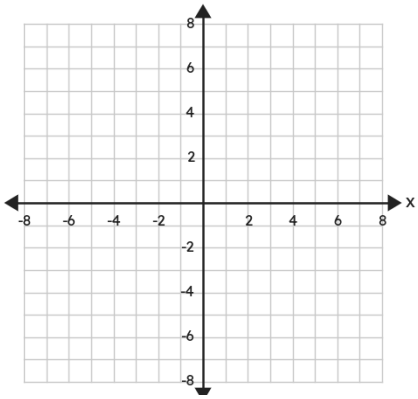
2. $y = 2x^2 + 4$



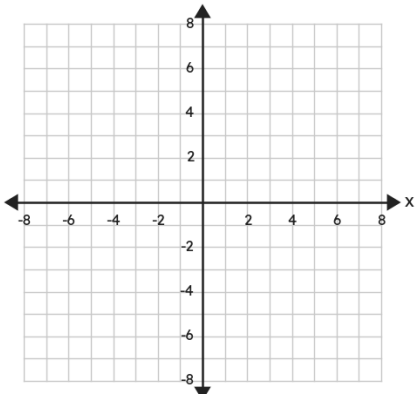
3. $y = x^2 + 6x + 9$



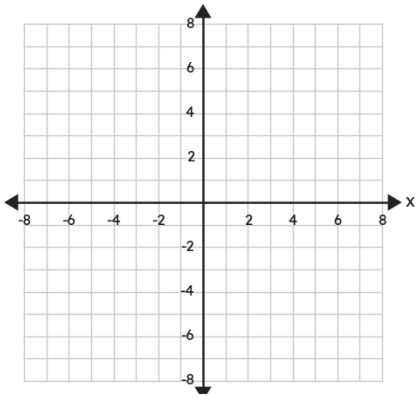
4. $y = (1/2)x^2 + 3$



5. $y = (1/2)x^2 + 2x + 5$



6. $y = 2x^2 + 3$

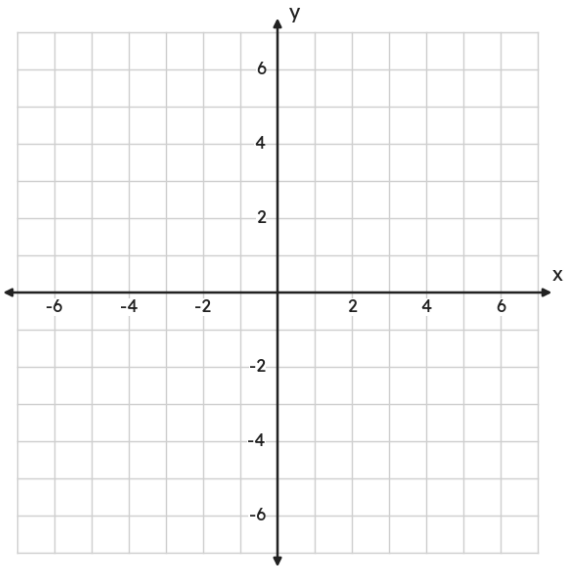


Name: _____ Date: _____

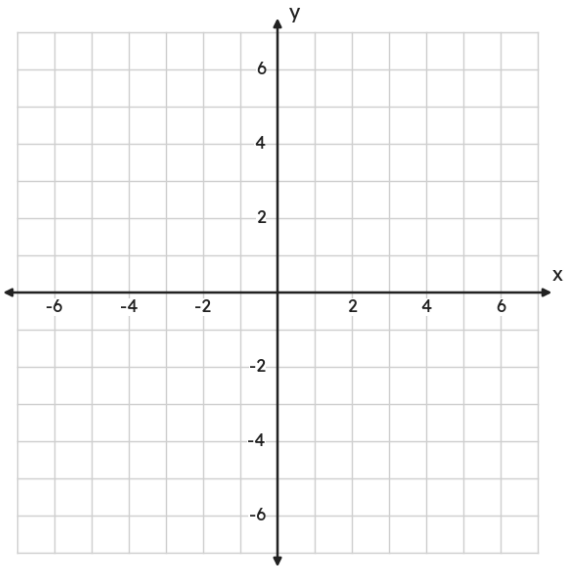
Graphing Functions - Medium

Graph each function on the grid. For a quadratic, give the vertex, axis of symmetry, and y-intercept; for an absolute value function, the vertex; for a square root function, the starting point.

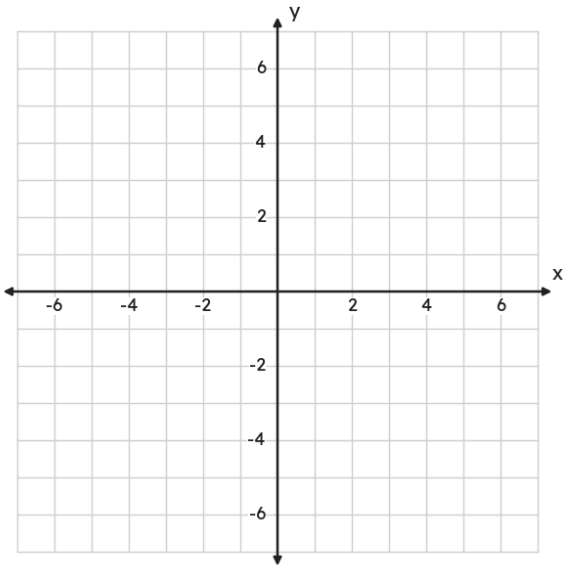
7. Graph f(x) = -|x + 4|.



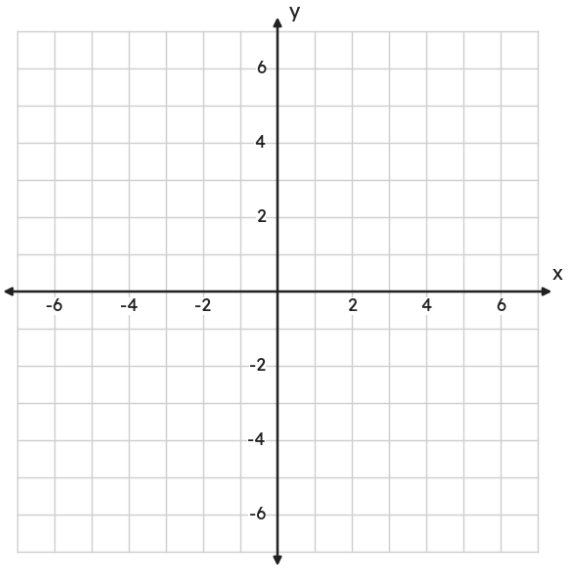
8. Graph f(x) = (1/2)|x|.



9. Graph f(x) = -2|x - 1| + 3.



10. Graph f(x) = -|x + 3| - 2.

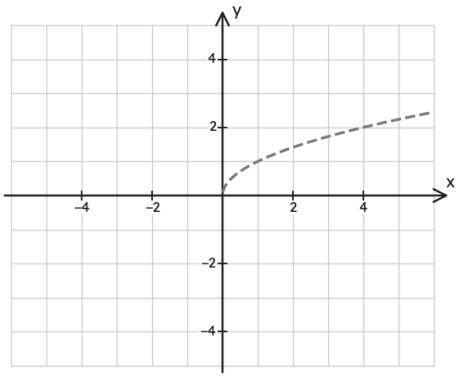


Name: _____ Date: _____

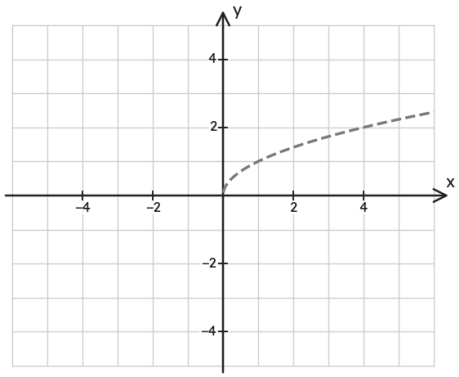
Graphing Functions - Medium

Graph each function on the grid. For a quadratic, give the vertex, axis of symmetry, and y-intercept; for an absolute value function, the vertex; for a square root function, the starting point.

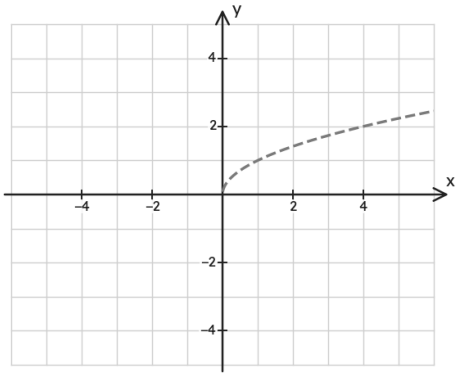
13. Graph $g(x) = \sqrt{(x - 2)}$.



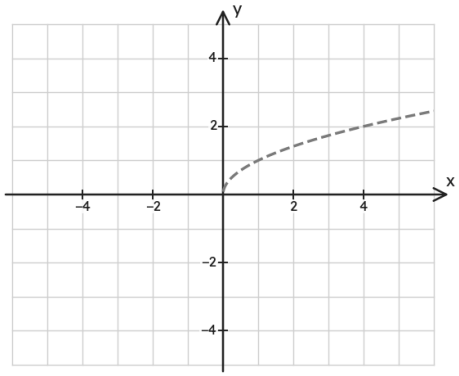
14. Graph $g(x) = 2\sqrt{(x - 2)} - 2$.



15. Graph $g(x) = -\sqrt{(x - 1)} + 3$.

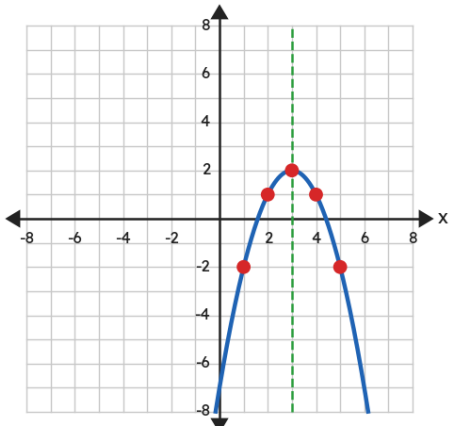


16. Graph $g(x) = 2\sqrt{x} - 3$.



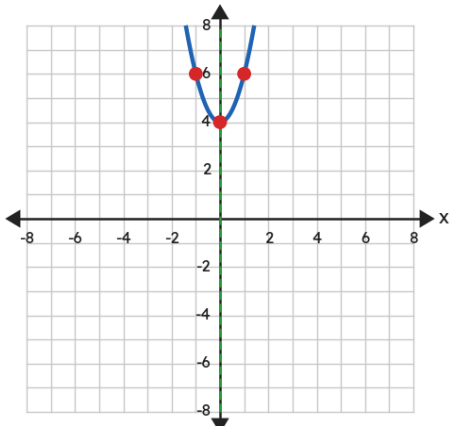
Graphing Functions - Medium - Answer Key

1. $y = -x^2 + 6x - 7$



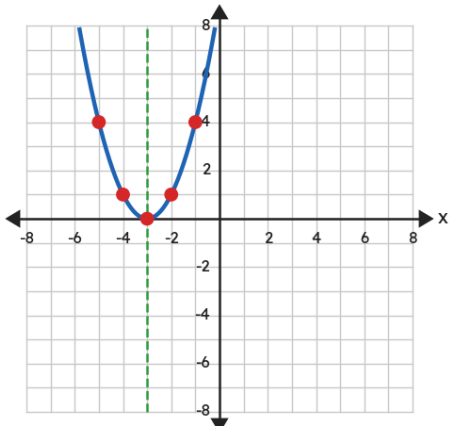
vertex (3, 2); axis x = 3; y-int. (0, -7)

2. $y = 2x^2 + 4$



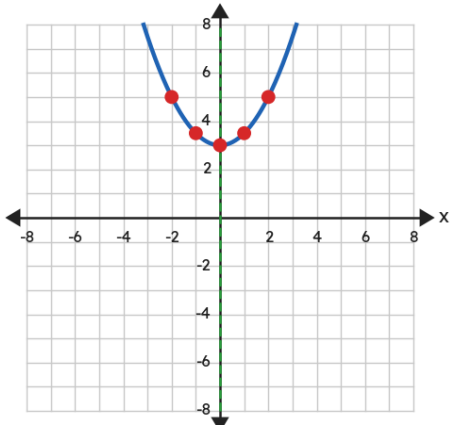
vertex (0, 4); axis x = 0; y-int. (0, 4)

3. $y = x^2 + 6x + 9$



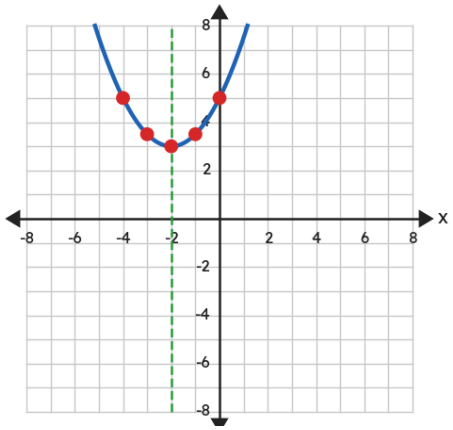
vertex (-3, 0); axis x = -3; y-int. (0, 9)

4. $y = (1/2)x^2 + 3$



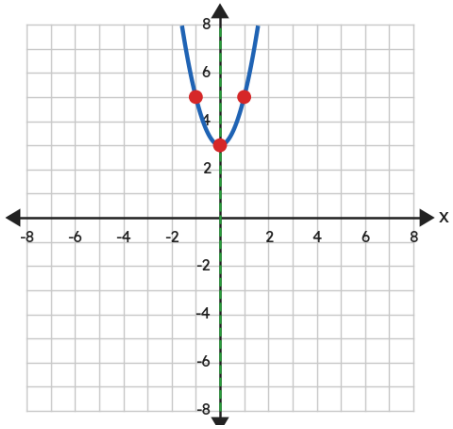
vertex (0, 3); axis x = 0; y-int. (0, 3)

5. $y = (1/2)x^2 + 2x + 5$



vertex (-2, 3); axis x = -2; y-int. (0, 5)

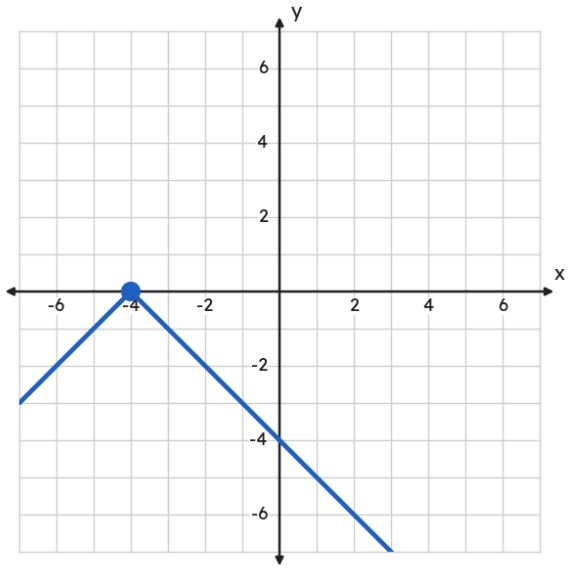
6. $y = 2x^2 + 3$



vertex (0, 3); axis x = 0; y-int. (0, 3)

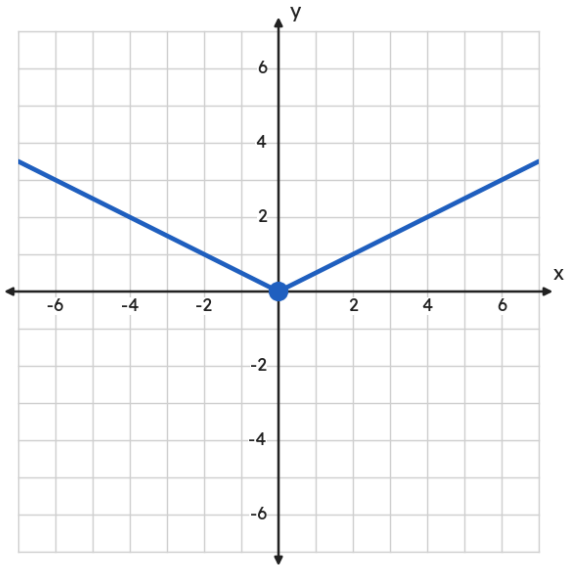
Graphing Functions - Medium - Answer Key

7. Graph f(x) = -|x + 4|.



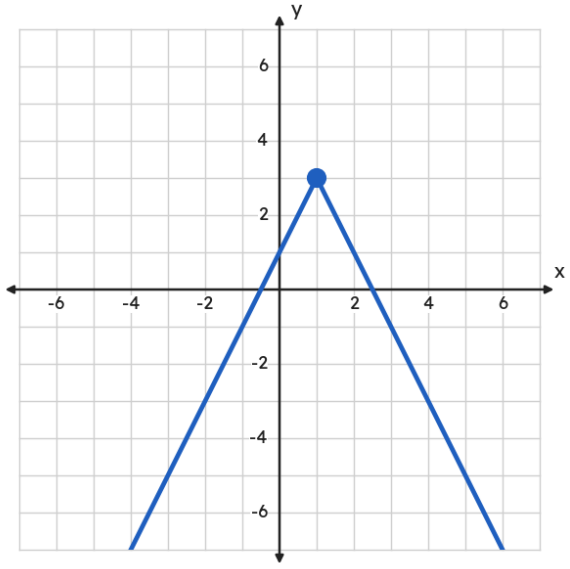
vertex (-4, 0); left 4, reflect in x-axis

8. Graph f(x) = (1/2)|x|.



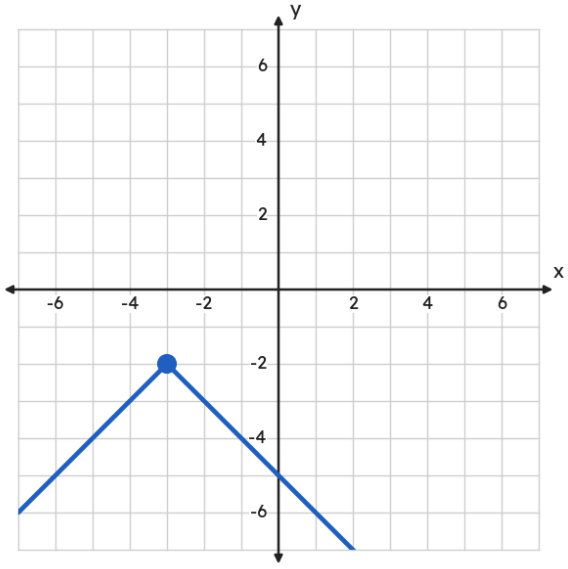
vertex (0, 0); compression by 1/2

9. Graph f(x) = -2|x - 1| + 3.



vertex (1, 3); right 1, up 3, stretch by 2, reflect in x-axis

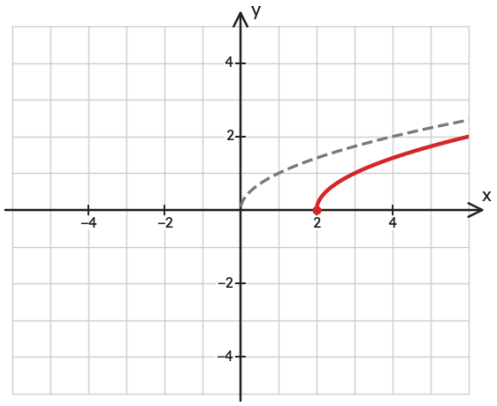
10. Graph f(x) = -|x + 3| - 2.



vertex (-3, -2); left 3, down 2, reflect in x-axis

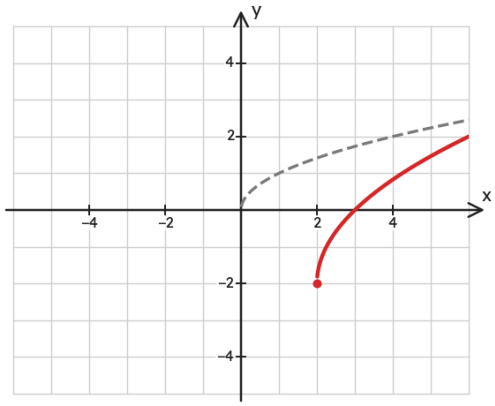
Graphing Functions - Medium - Answer Key

13. Graph $g(x) = \sqrt{(x - 2)}$.



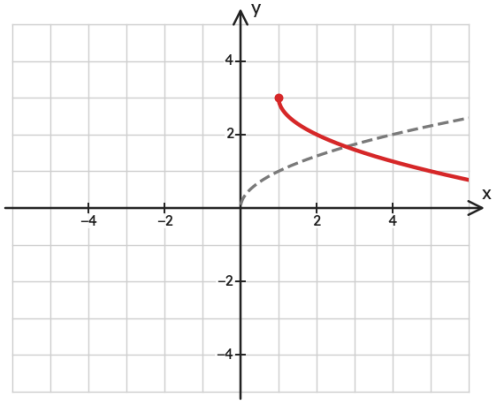
start (2, 0); domain $x \geq 2$; range $y \geq 0$

14. Graph $g(x) = 2\sqrt{(x - 2)} - 2$.



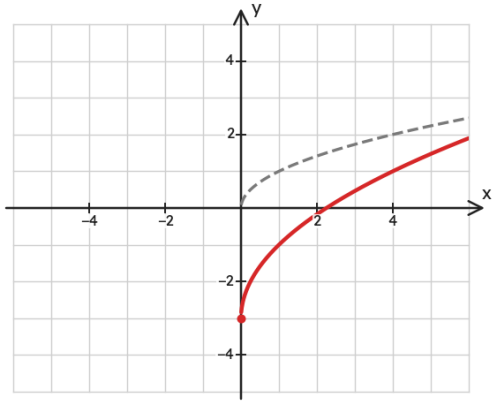
start (2, −2); domain $x \geq 2$; range $y \geq -2$

15. Graph $g(x) = -\sqrt{(x - 1)} + 3$.



start (1, 3); domain $x \geq 1$; range $y \leq 3$

16. Graph $g(x) = 2\sqrt{x} - 3$.



start (0, −3); domain $x \geq 0$; range $y \geq -3$