Name: Key

9.1 Standard Form of Quadratics (day 2)

Find the vertex, the equation of the axis of symmetry, and the y–intercept of the graph of each function.

1. $y = 2x^2 - 8x + 6$

a.o.s: $x = 2$

v: $(2, -2)$

y-int: 6

2. $y = x^2 + 4x + 6$

a.o.s. $x = -2$

v: $(-2, 2)$

y-int: 6

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

a.o.s: $x = -1$

v: $(-1, 6)$

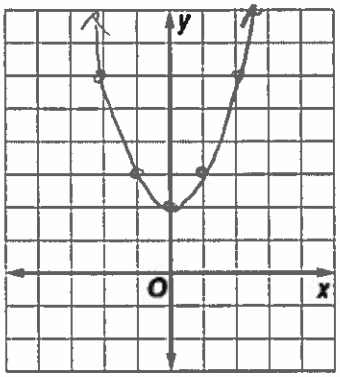
y-int. 3

Graph the quadratic equations using the standard form approach.

4. $y = x^2 + 2$

a.o.s: $x = 0$

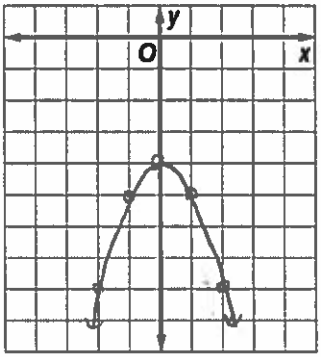
v: $(0, 2)$



5. $y = -x^2 - 4$

a.o.s: $x = 0$

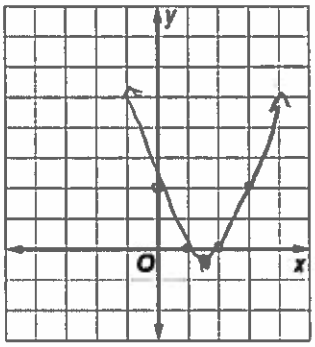
v: $(0, -4)$



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

a.o.s: $x = \frac{3}{2}$

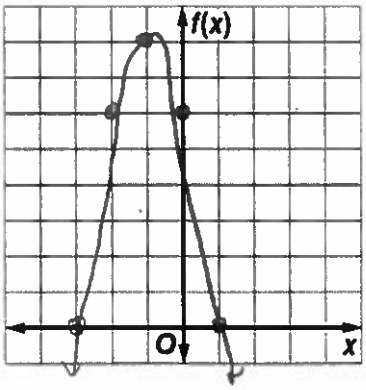
$v = \left(\frac{3}{2}, \frac{-1}{4}\right)$



7. $f(x) = -2x^2 - 4x + 6$

a.o.s. $x = -1$

v: $(-1, 8)$

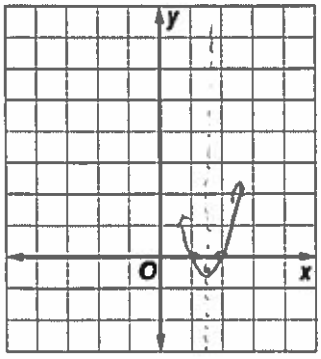


8. Rewrite the following quadratic function from standard form to intercept form. Then, graph the function. $y = x^2 - 3x + 2$

$y = (x-2)(x-1)$

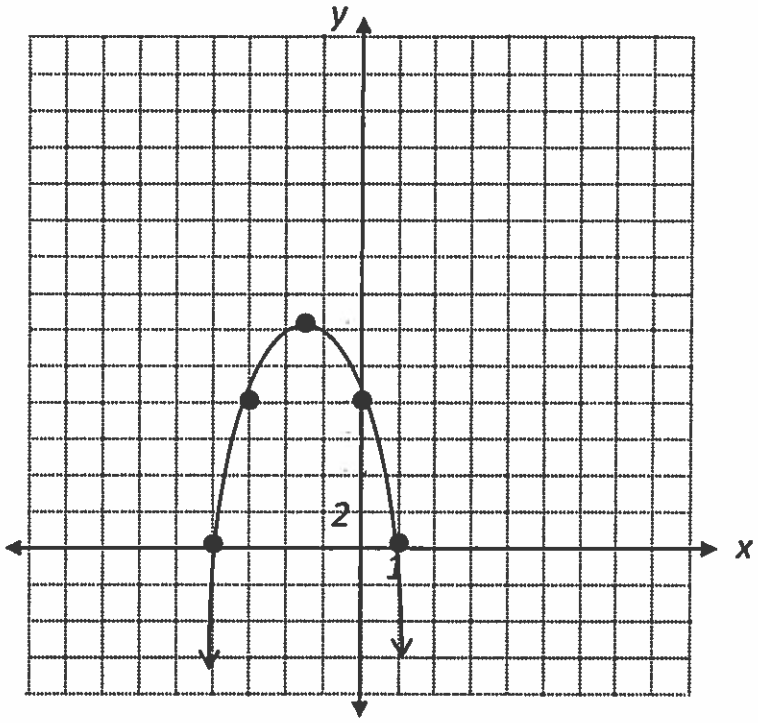
a.o.s: $x = \frac{3}{2}$

$v = \left(\frac{3}{2}, \frac{-1}{4}\right)$



9. How do you distinguish between intercept form and standard form for quadratic functions?

Use the graph below to answer the following questions:



10. Which of the following is the Axis of Symmetry?

a) $x = -4$ b) $x = -2$ c) $x = -1.5$ d) $x = 1$ e) $x = 2$

11. True or False: The parabola has a maximum, not a minimum.

12. Which of the following is the y-intercept of the function?

a) -4 b) 1 c) 2 d) 4 e) 8

13. What is the vertex of this quadratic?

a) (-2,6) b) (-2, 12) c) (-2, 12.5) d) (-1.5, 12.5) e) (-1.5, 6.25)

14. Which equation below *could* be the quadratic graphed?

a) $y = a(x + 1)(x - 4)$ b) $y = a(x - 1)(x + 4)$ c) $y = x^2 + 5x + 10$

d) $y = -3x^2 + 2x + 6$ e) none of these