Math 10D Date_____

© 2020 Kuta Software LLC. All rights reserved.

Vertex Form

Identify the vertex, axis of symmetry, direction of opening, and y-intercept of each.

1) $y = -8(x - 3)^2 - 1$

2) $y = 2(x + 3)^2 + 7$

3) $y = -\frac{1}{17}(x + 1)^2 + 8$

4) $y = 3(x - 6)^2 + 4$

Convert from Vertex Form to Standard Form by expanding.

5) $y = 3(x + 4)^2 + 2$

6) $y = -(x + 8)^2 - 5$

© 2020 Kuta Software LLC. All rights reserved.

Made with Infinite Algebra 2.

7) $y = -\frac{1}{11}(x-5)^2 - 4$

8) $y = -2(x-3)^2 - 9$

9) $y = 2(x+9)^2 + 3$

10) $y = 7(x-4)^2 + 1$

Convert from Standard Form to Vertex Form by finding the zeros, AoS and the vertex.

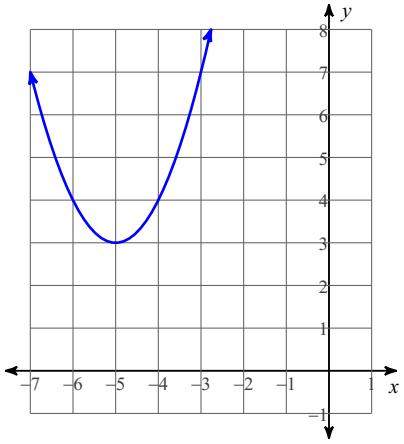
11) $y = 3x^2 - 12x - 96$

12) $y = -2x^2 - 14x - 20$

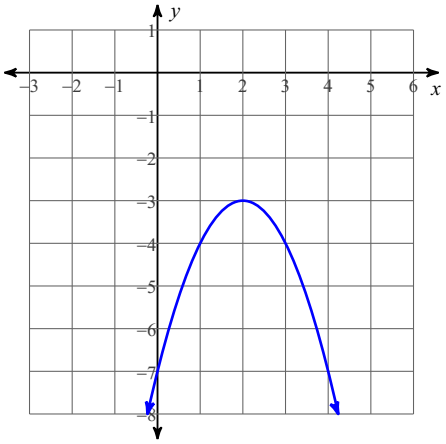
© 2020 Kuta Software LLC. All rights reserved.Made with Infinite Algebra 2.

State the vertex and another point, then write the vertex form equation of the parabola.

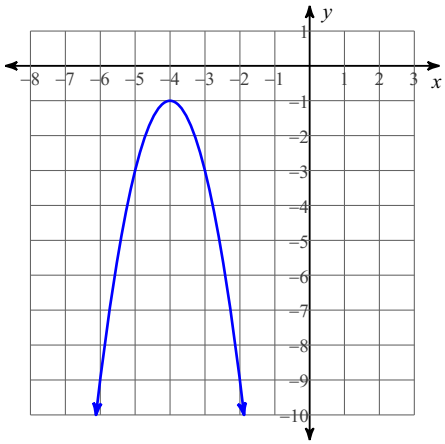
13)



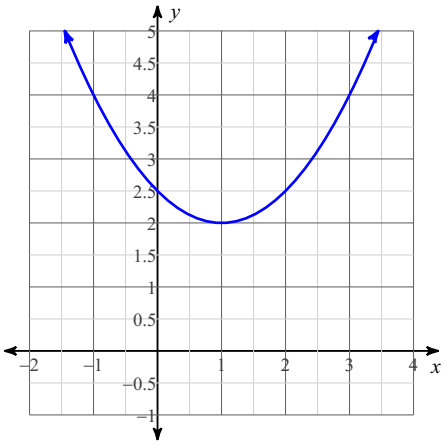
14)



15)



16)



17) A potato is shot out of a potato gun. After 5 seconds, the potato reaches a maximum height of 400ft. The potato mashes into the ground after 10 seconds. Determine the equation, in vertex form, that represents the path of the potato.

© 2020 Kuta Software LLC. All rights reserved. Made with Infinite Algebra 2.