

# Quadratics in Standard Form - Converting & Graphing

Period \_\_\_\_\_

Use the information provided to write the standard form equation of each parabola.

1)  $f(x) = (x + 10)^2 + 8$

2)  $f(x) = 8(x - 3)^2$

3)  $f(x) = -(x - 8)^2 + 5$

4)  $f(x) = 3(x + 2)^2 - 9$

5)  $f(x) = -\frac{1}{2}(x - 10)^2 - 3$

6)  $f(x) = 3(x + 7)^2 + 8$

Use the standard form equation to find the vertex of each parabola.

7)  $y = -3x^2 + 24x - 39$

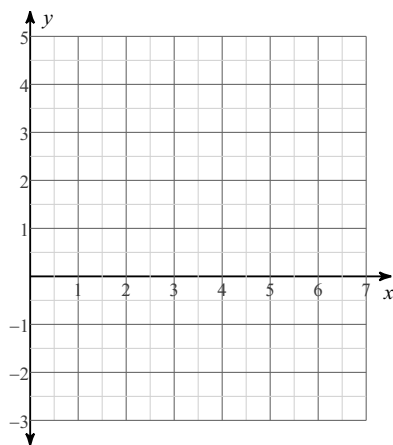
8)  $y = x^2 - 6x + 1$

9)  $y = x^2 - 14x + 59$

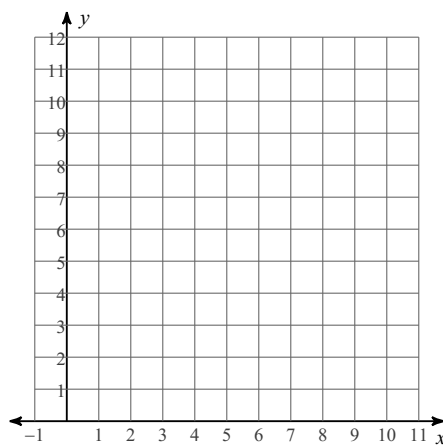
10)  $y = -3x^2 + 5$

For each quadratic function, find the vertex, then sketch the graph of each function.

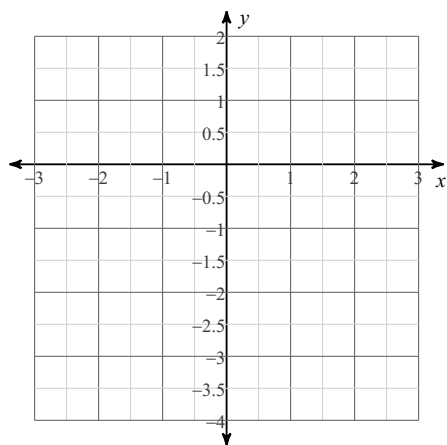
11)  $y = x^2 - 8x + 15$



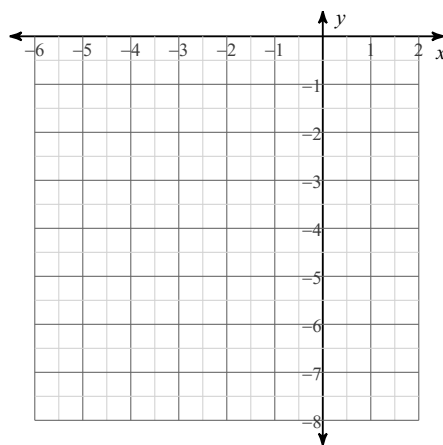
12)  $y = 2x^2 - 8x + 11$



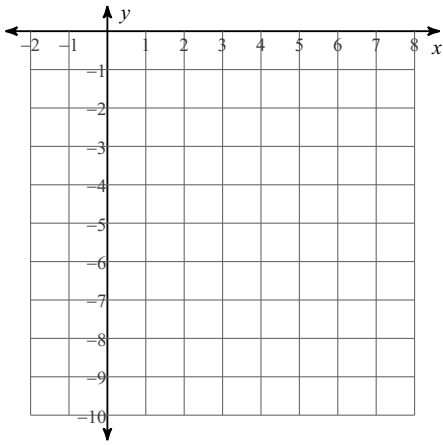
13)  $y = -x^2 - 2x$



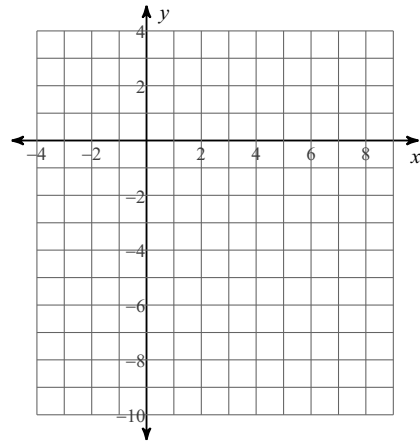
14)  $y = -x^2 - 4x - 7$



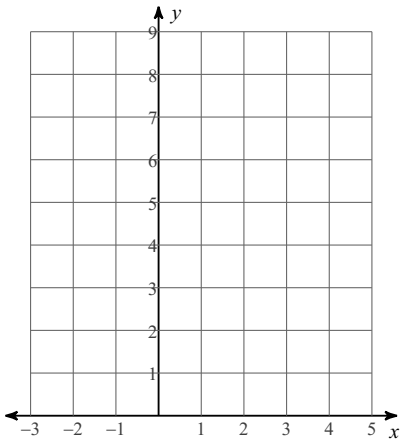
15)  $y = -2x^2 + 4x - 3$



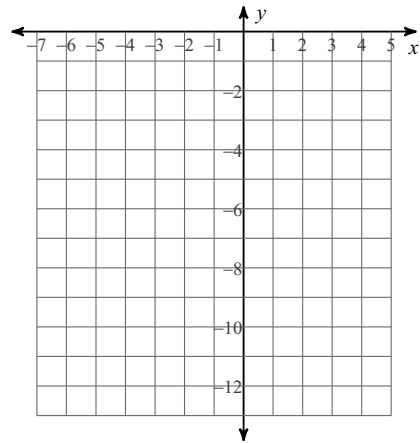
16)  $y = -3x^2 + 24x - 45$



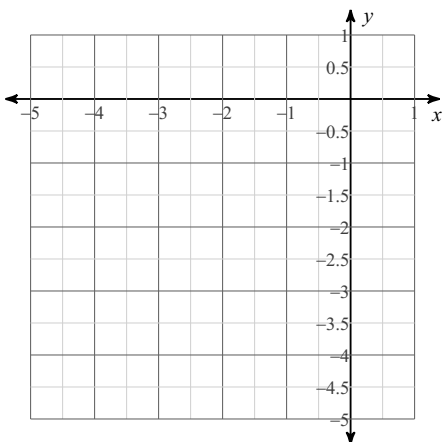
17)  $y = x^2 + 2x + 5$



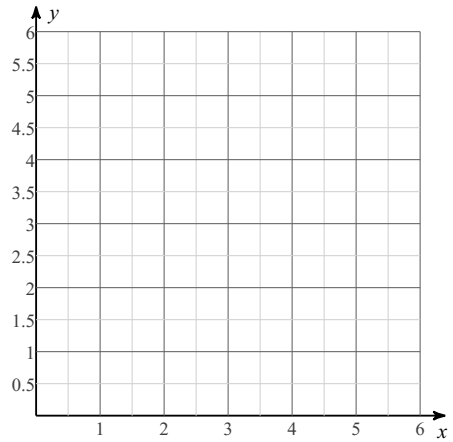
18)  $y = -2x^2 - 4x - 6$



19)  $y = \frac{1}{2}x^2 + 2x - 1$



20)  $y = x^2 - 4x + 5$



# Answers to Quadratics in Standard Form - Converting & Graphing (ID: 1)

1)  $f(x) = x^2 + 20x + 108$

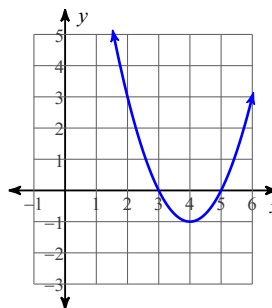
3)  $f(x) = -x^2 + 16x - 59$

5)  $f(x) = -\frac{1}{2}x^2 + 10x - 53$

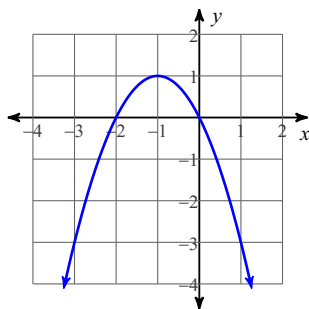
7) (4, 9)

9) (7, 10)

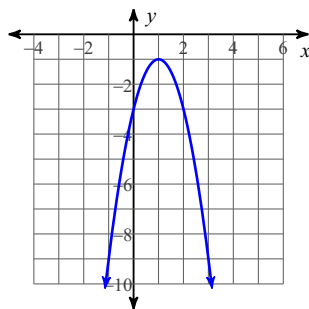
11)



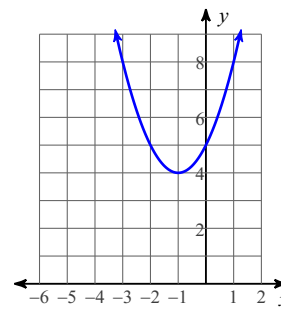
13)



15)



17)



19)

