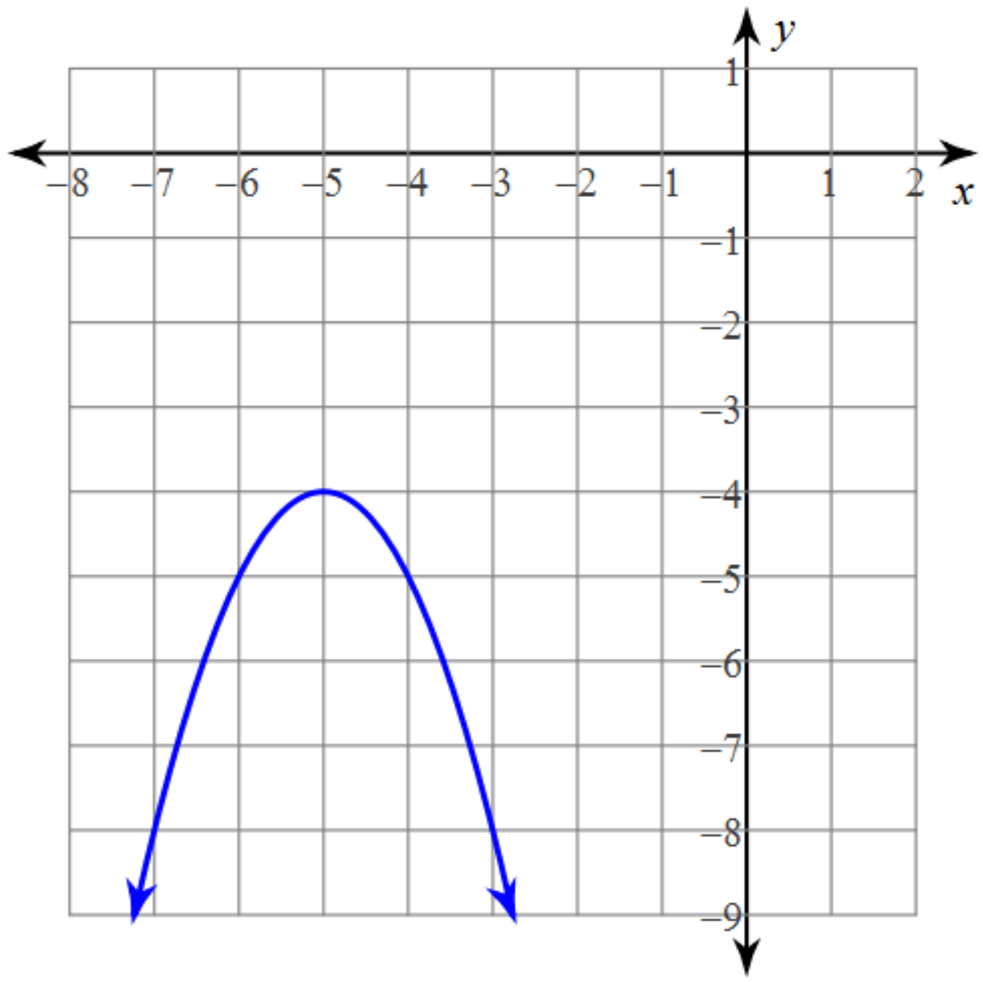
Use the information provided to write the vertex form equation of each parabola.

7)



Vertex $(-5, -4)$

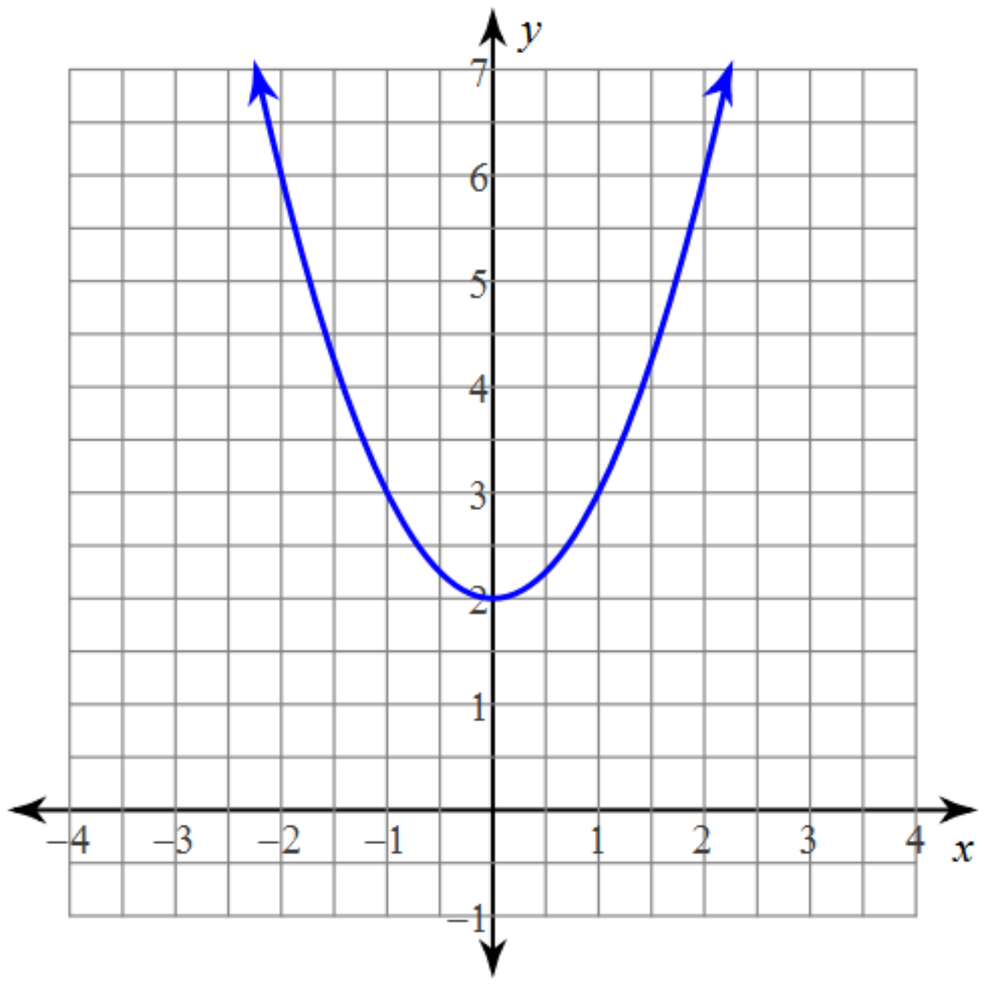
$y = a(x-h)^2 + k$

$y = -1(x+5)^2 - 4$

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

min

8)



(0, 2)

$y = x^2 + 2$

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

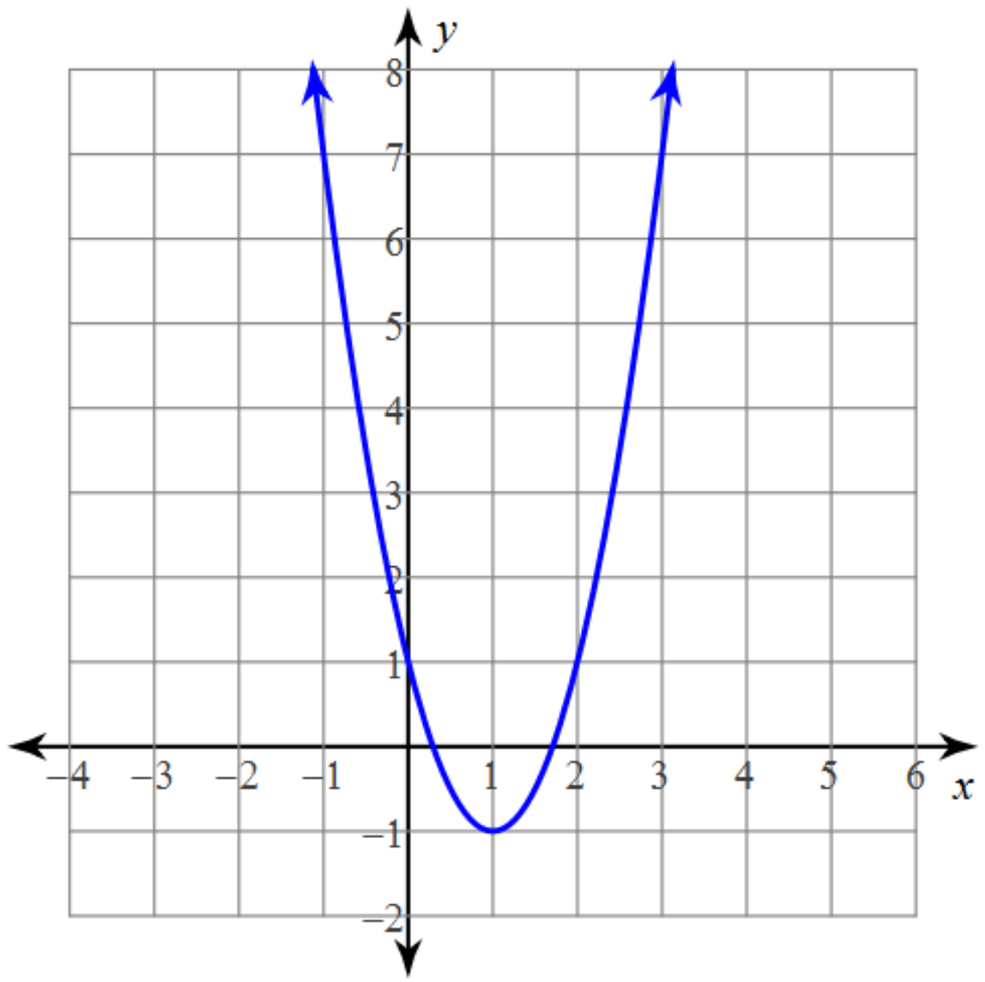
min h, k

$(1, -1)$

$y = a(x-h)^2 + k$

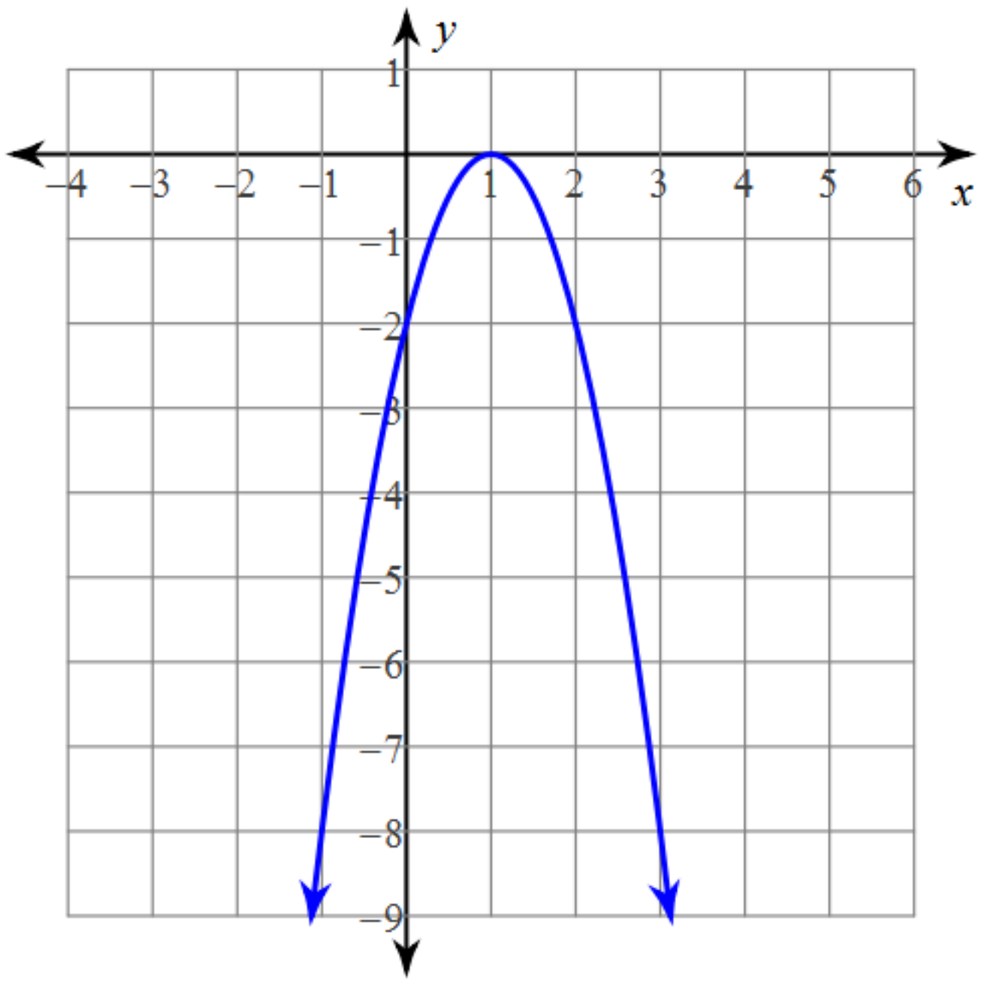
$y = 2(x-1)^2 - 1$

9)



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

10)



max (1, 0)

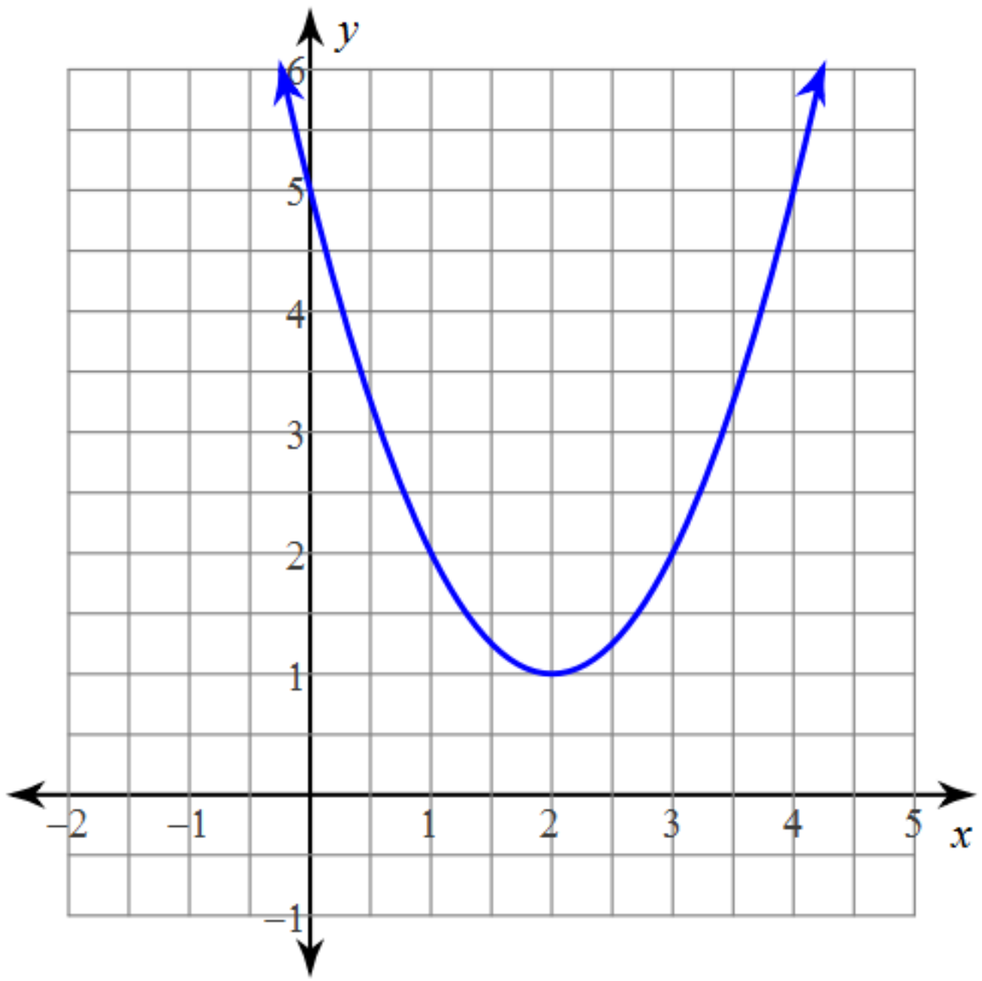
$y = -2(x-1)^2 + 0$

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

min

(2, 1)

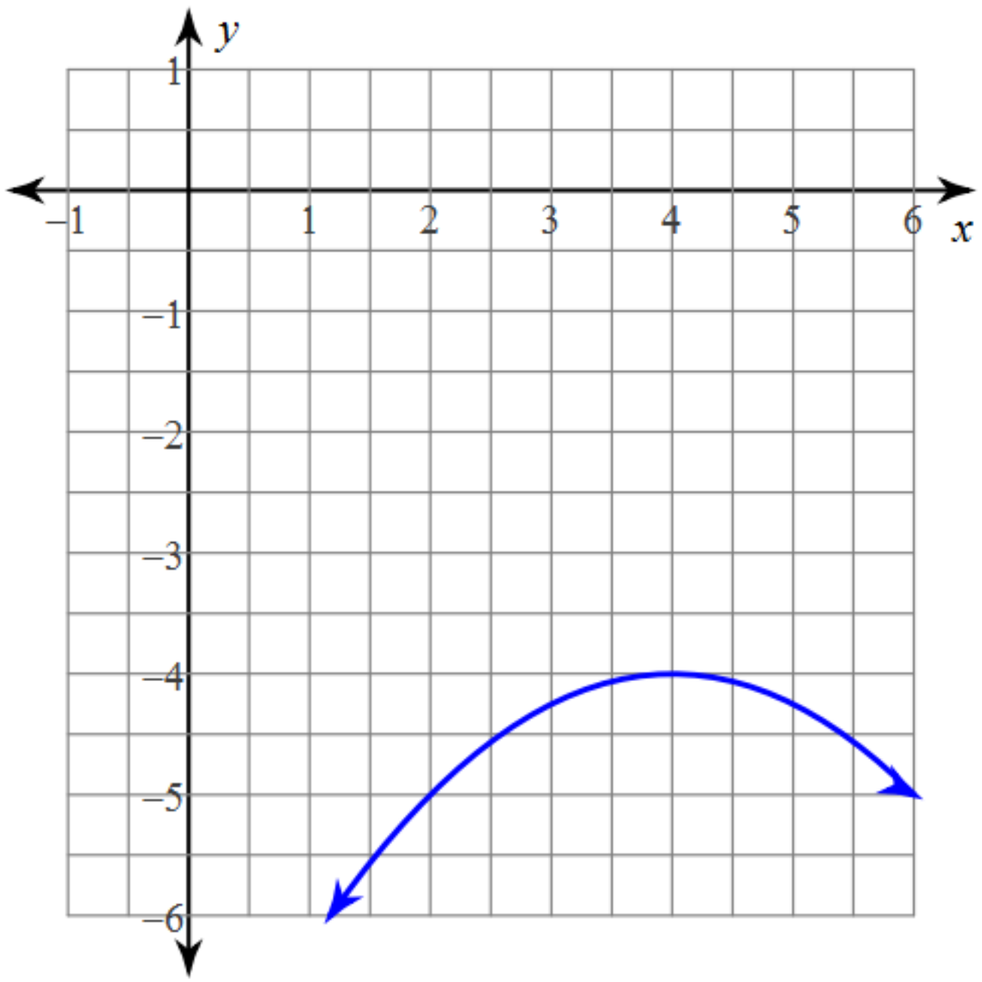
11)



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

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

12)



max $(4, -4)$

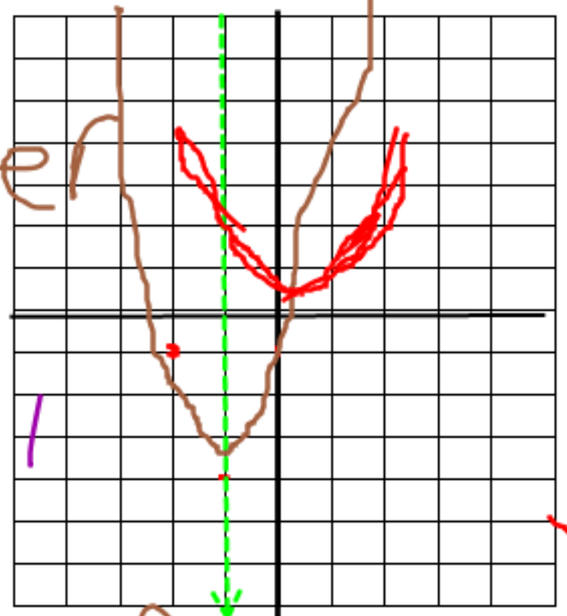
$y = -\frac{1}{2}(x-4)^2 - 4$

Quadratics PRACTICE: Using the vertex form, $y = a(x - h)^2 + k$ Name: _____

Graph each equation using a method of your choice (technology, table of values, etc.)
Write the point that represents the vertex and y-intercept. Write the equation in standard form.
List the transformations specifically. Ex: stretch of 3 or vertical shift of -5.

1) a) Graph $y = 3(x + 1)^2 - 4$

Y-int is (0, 1).



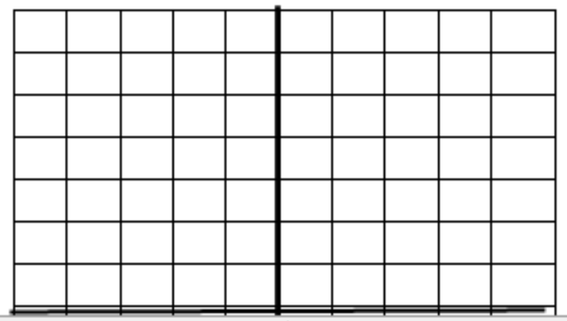
c) List the transformations:

d) Re-write $y = 3(x + 1)^2 - 4$ in standard form

2) a) Graph $y = -(x - 2)^2 + 6$

b) Vertex is (___, ___).

Y-int is (___, ___).



c) List the transformations: _____

_____.

d) Re-write $y = -(x - 2)^2 + 6$ in standard form

2) a) Graph $y = -(x-2)^2 + 6$

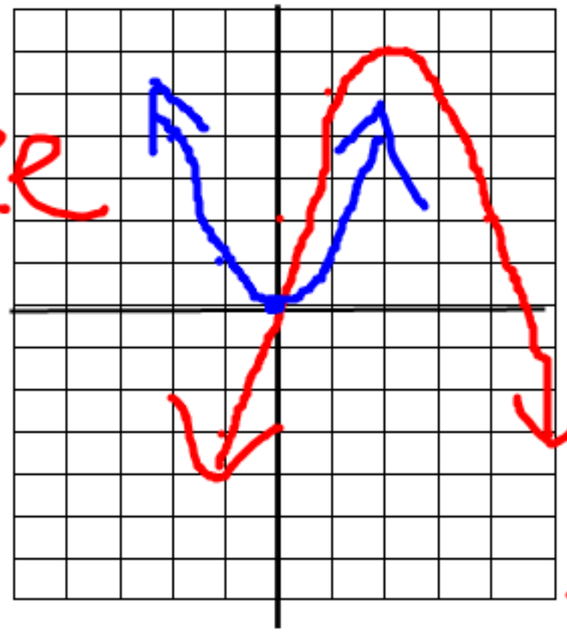
b) Vertex is (2, 6).

Y-int is (0, 2).

c) List the transformations: _____

_____.

d) Re-write $y = -(x-2)^2 + 6$ in standard form



Max
some size
2 to the
right
up 6

$y = -(x-2)(x-2) + 6$

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

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

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

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

3) a) Graph $y = 3x^2 - 6$

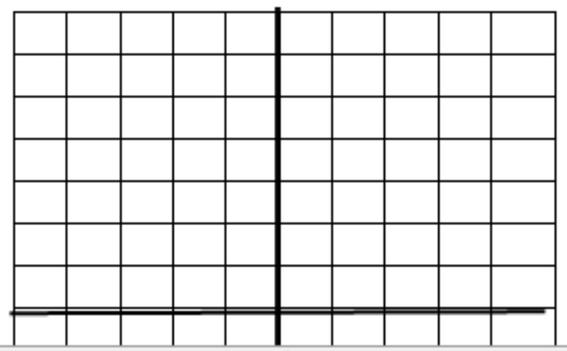
b) Vertex is (___, ___).

Y-int is (___, ___).

c) List the transformations: _____

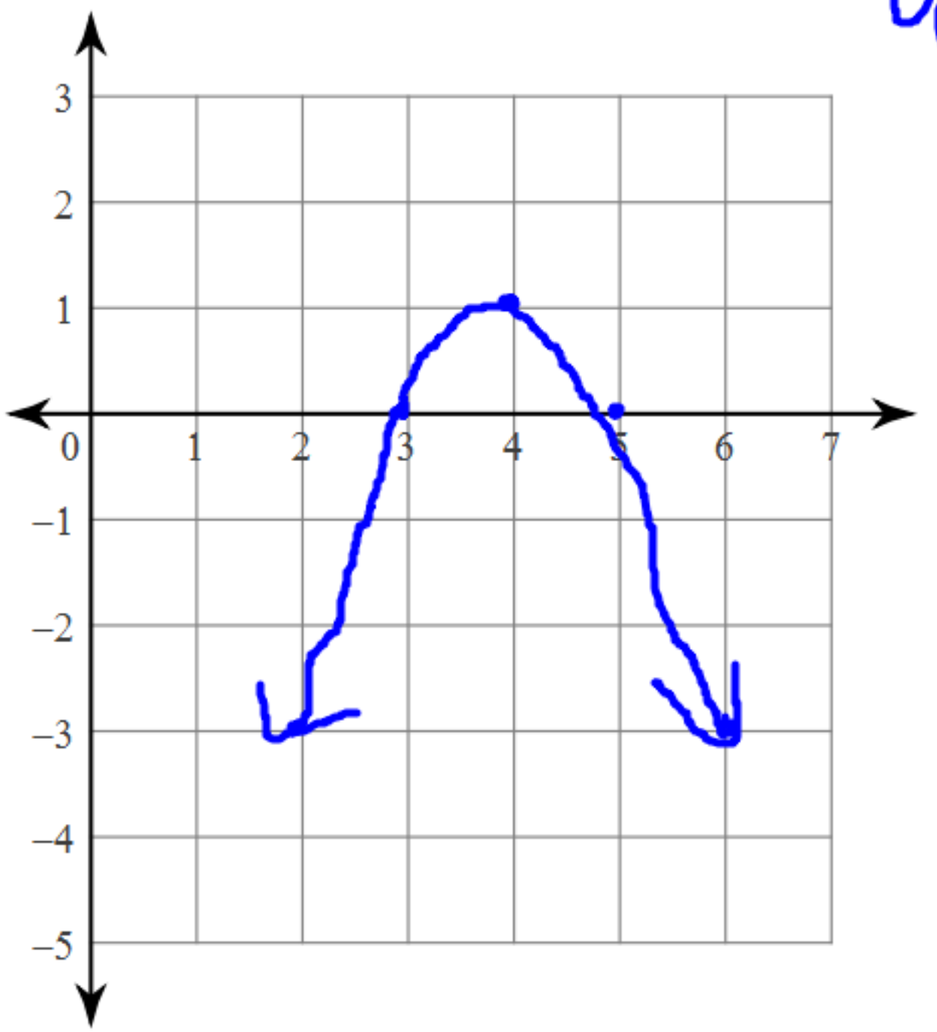
_____.

d) Re-write $y = 3x^2 - 6$ in standard form



Sketch the graph of each function. CHANGE TO STANDARD FORM.

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



vertex (4, 1)

$x = 4$

$y = (x-4)(x-4) + 1$

$y = -x^2 + 4x + 4x - 16$

$y = x^2 + 16x^2 - 15$

$y = -15x^2 - 16$