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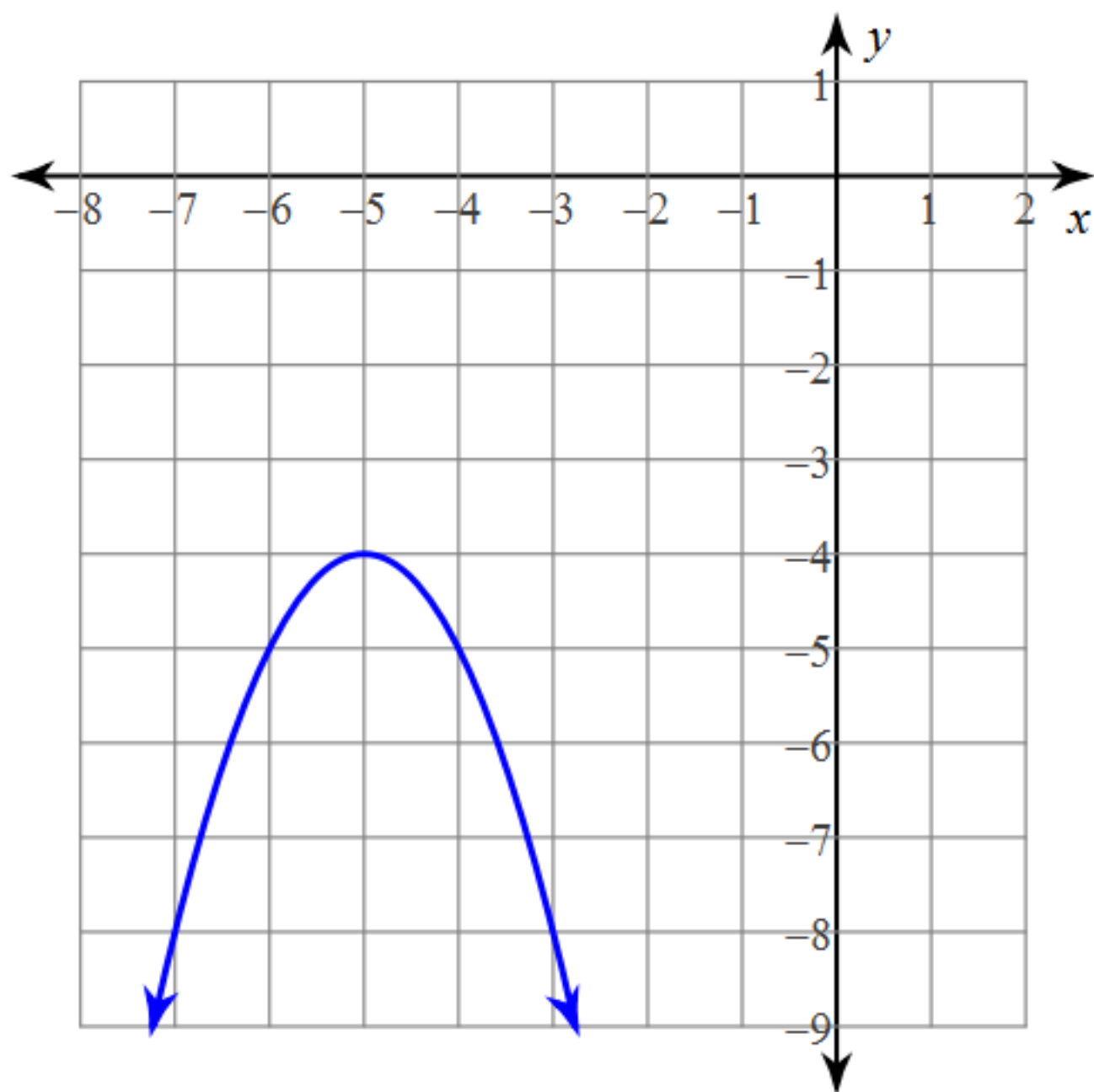
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1-up ▼

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

7)



$$\text{Vertex } (-5, -4)$$

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

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

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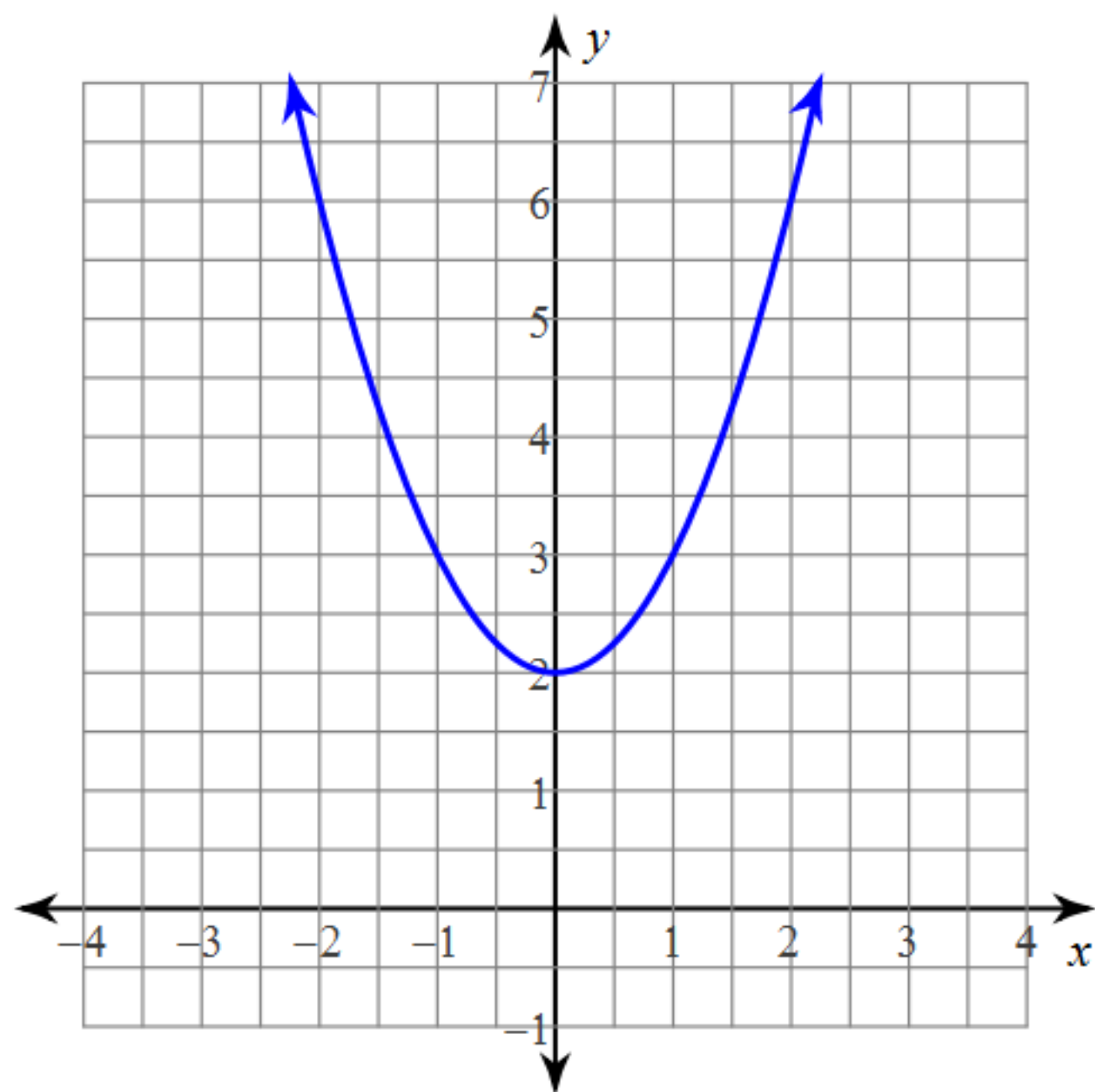
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Use the information provided to write the vertex form equation of each parabola.

8)



min

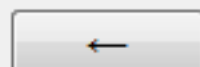
$$y = (x - 0)^2 + 2$$

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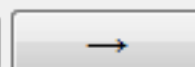
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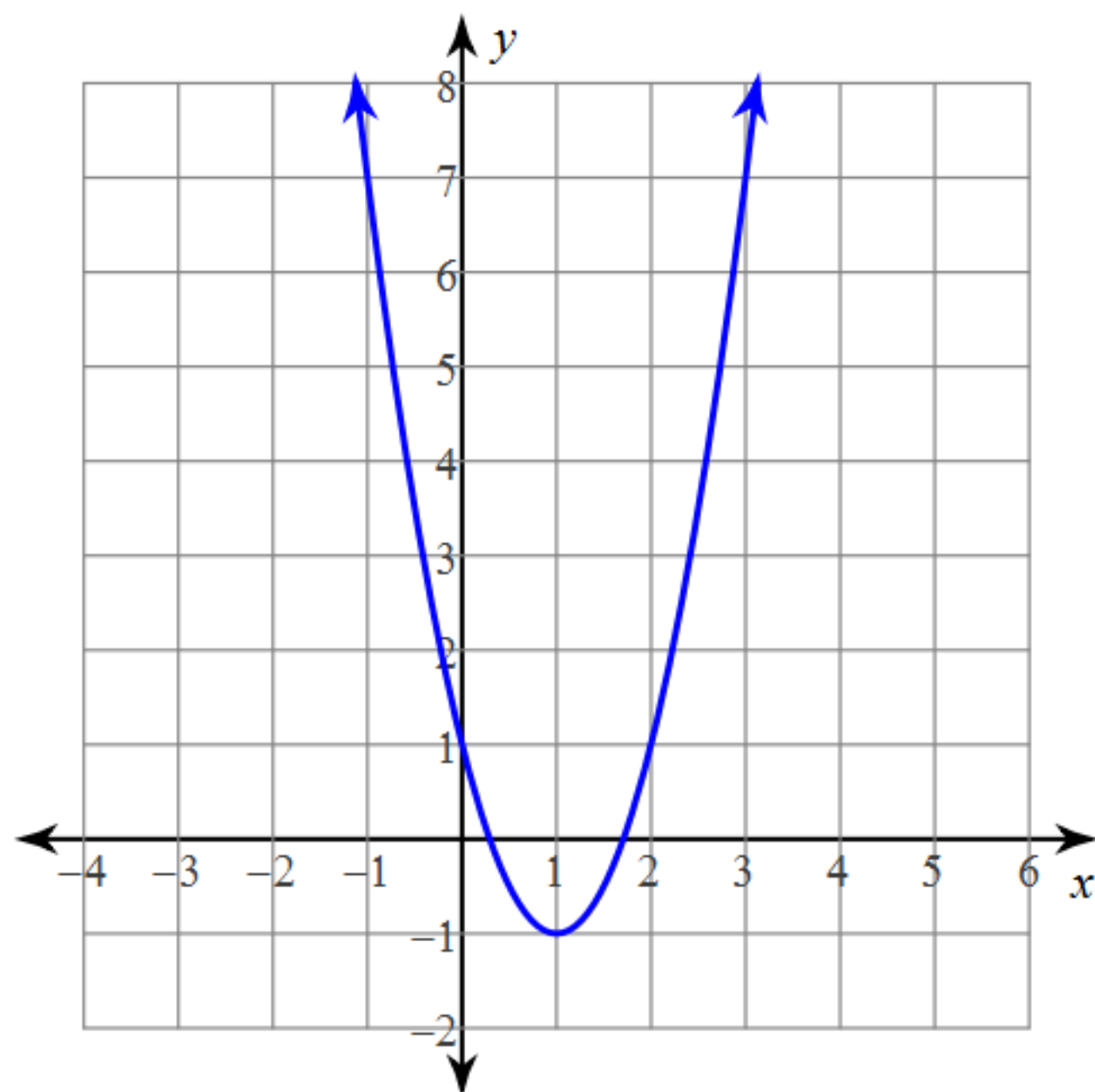
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1-up

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

9)



m h, k

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

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

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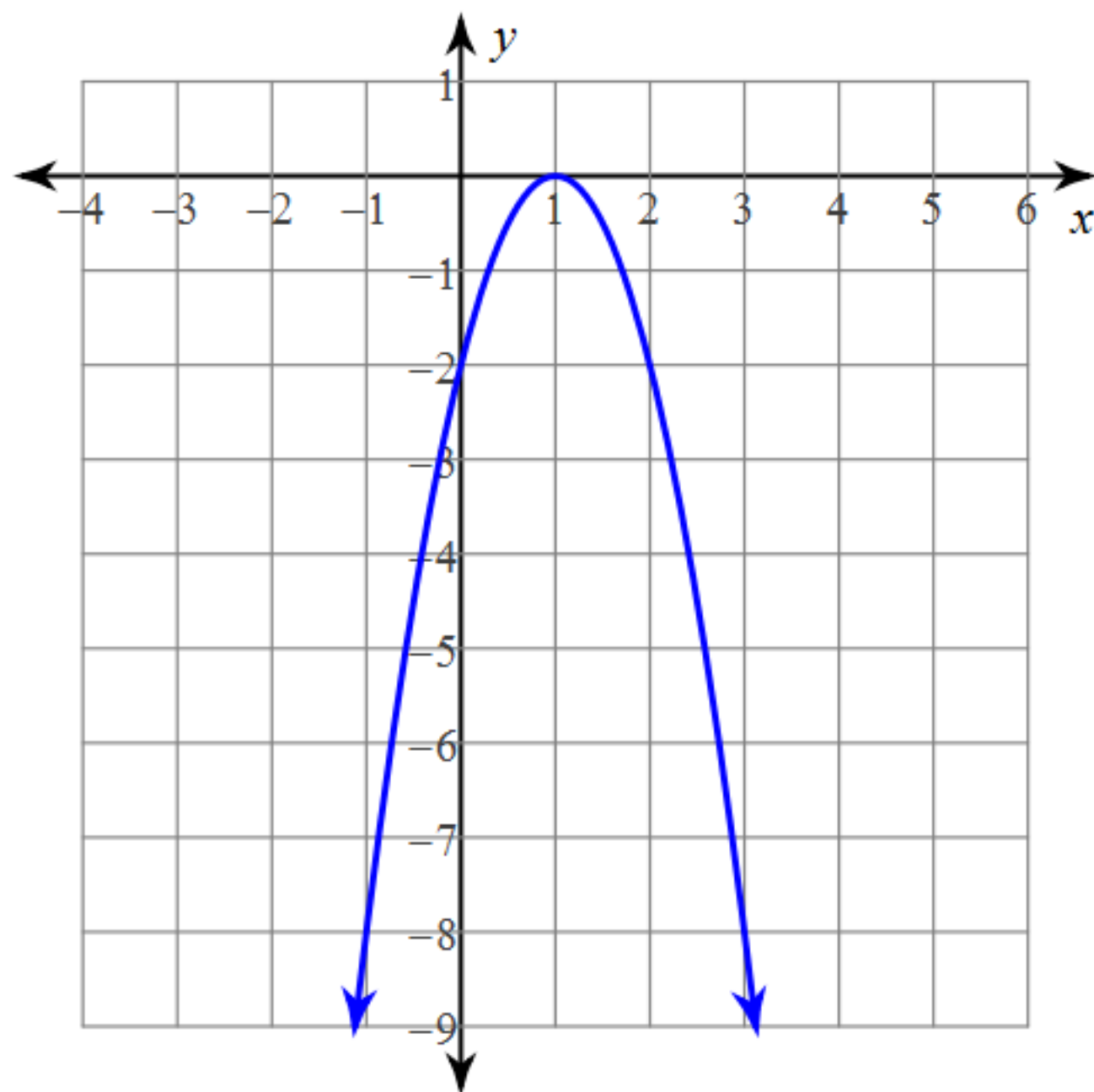
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1-up

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

10)



$$max (, 0)$$

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

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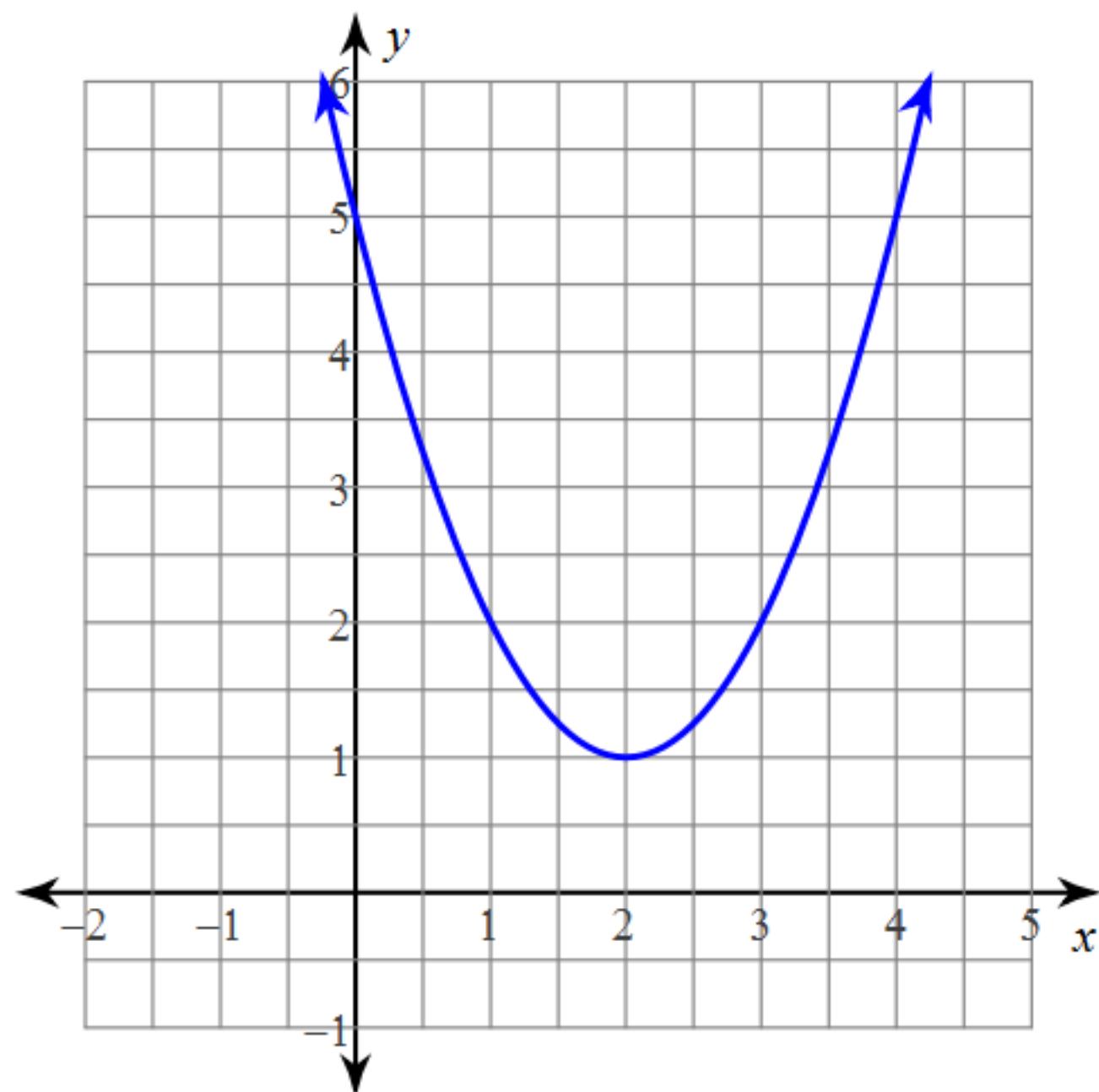
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1-up ▼

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

11)



min

 $(2, 1)$

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

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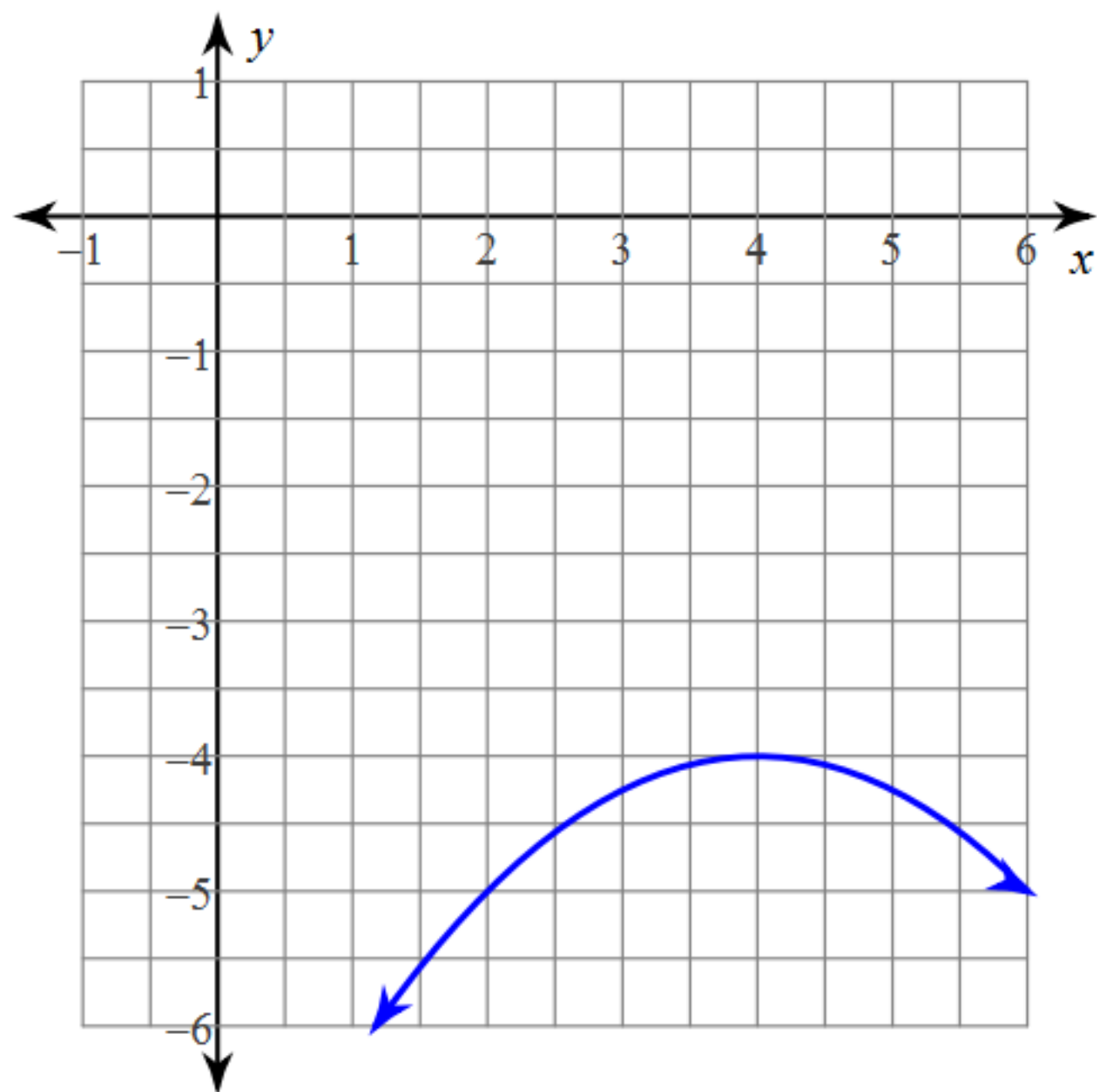
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1-up

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

12)



max

 $(4, -4)$

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



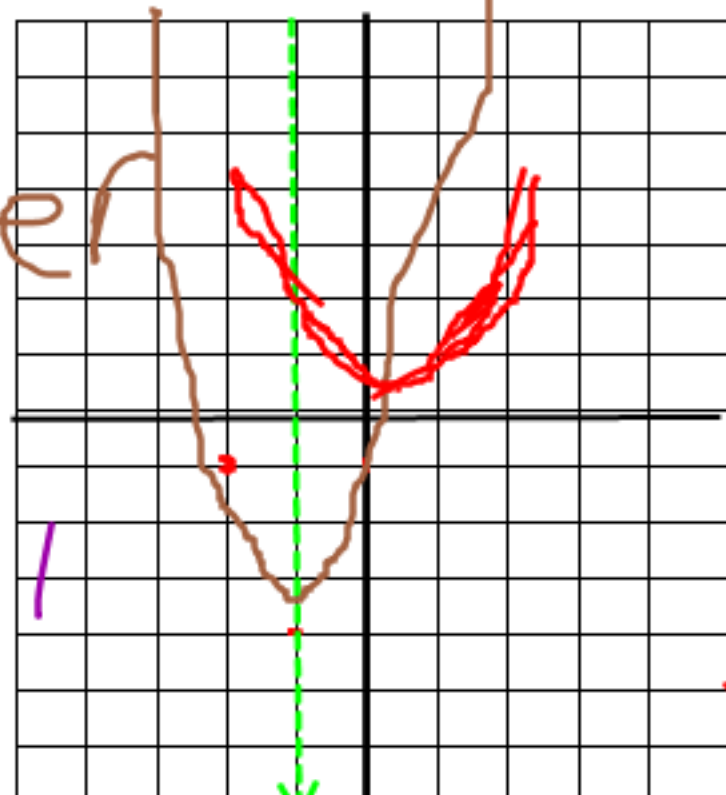
Quadratics **PRACTICE**: Using the vertex form, $y = a(x - h)^2 + k$

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

min
3x skinnier
down 4
to the left 1

a of 3 $x = -1$

vertex $(-1, -4)$

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

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

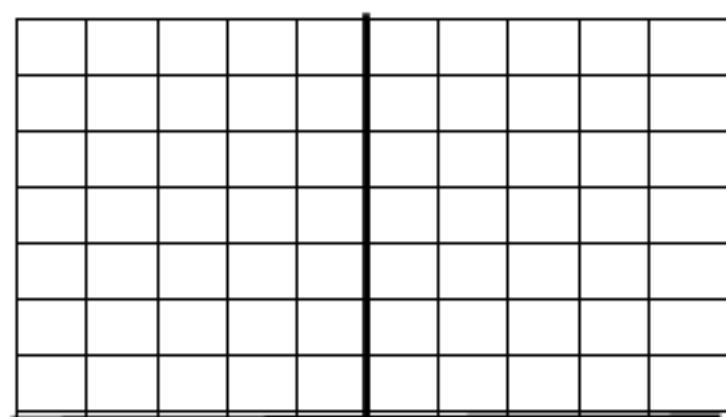
$$y = 3x^2 + 6x + 3 - 4$$

$$y = 3x^2 + 6x - 1$$

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

b) Vertex is (2, 6).

Y-int is (0, 5).



c) List the transformations: _____

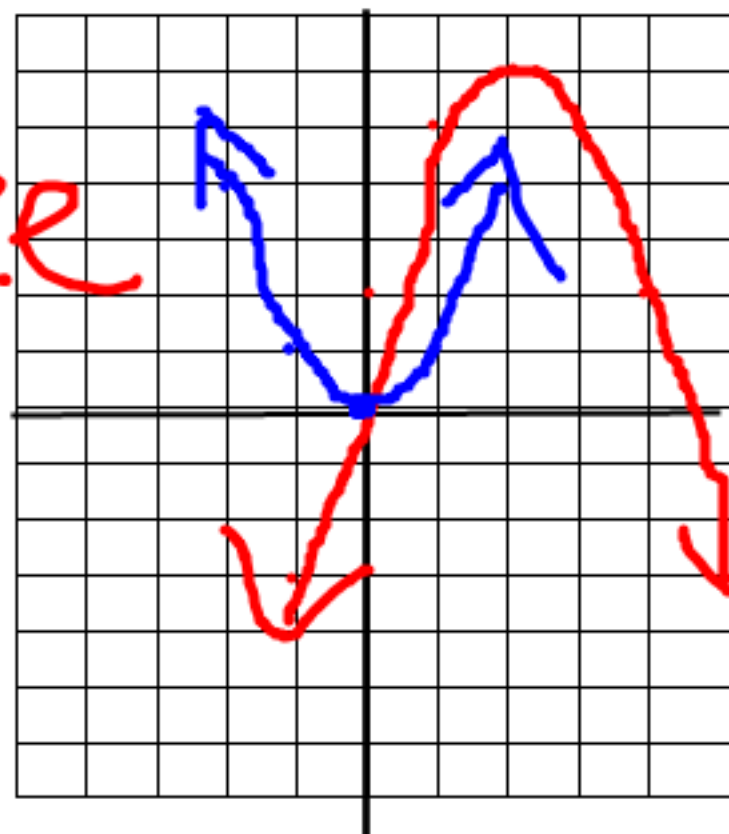
d) Re-write $y = -(x - 2)^2 + 6$ in standard form



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

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

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

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

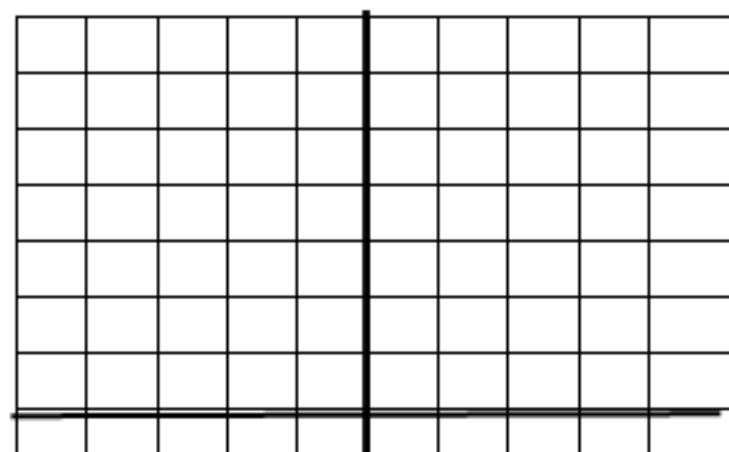
$$y = -x^2 + 4x - 4 + 6$$

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

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

b) Vertex is $(0, -6)$.

Y-int is $(0, -6)$.



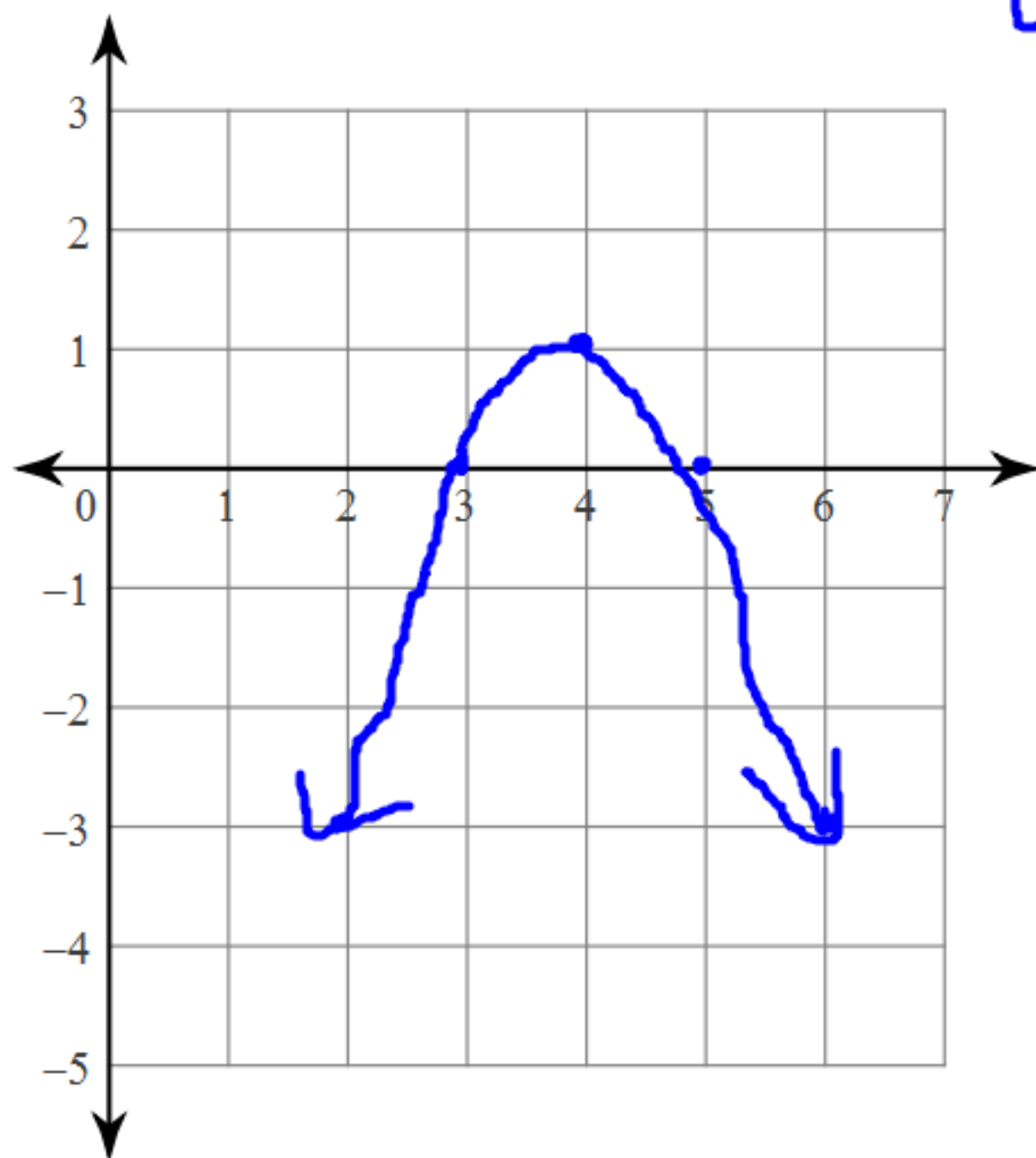
c) List the transformations: _____

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

Max
same size
2 to the
right
up 6

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

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



Vertex $(4, 1)$

$x = 4$

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

$y = -x^2 - 4x - 4x - 16 + 1$

$y = -x^2 - 8x - 15$

$y = -x^2 - 8x - 15$