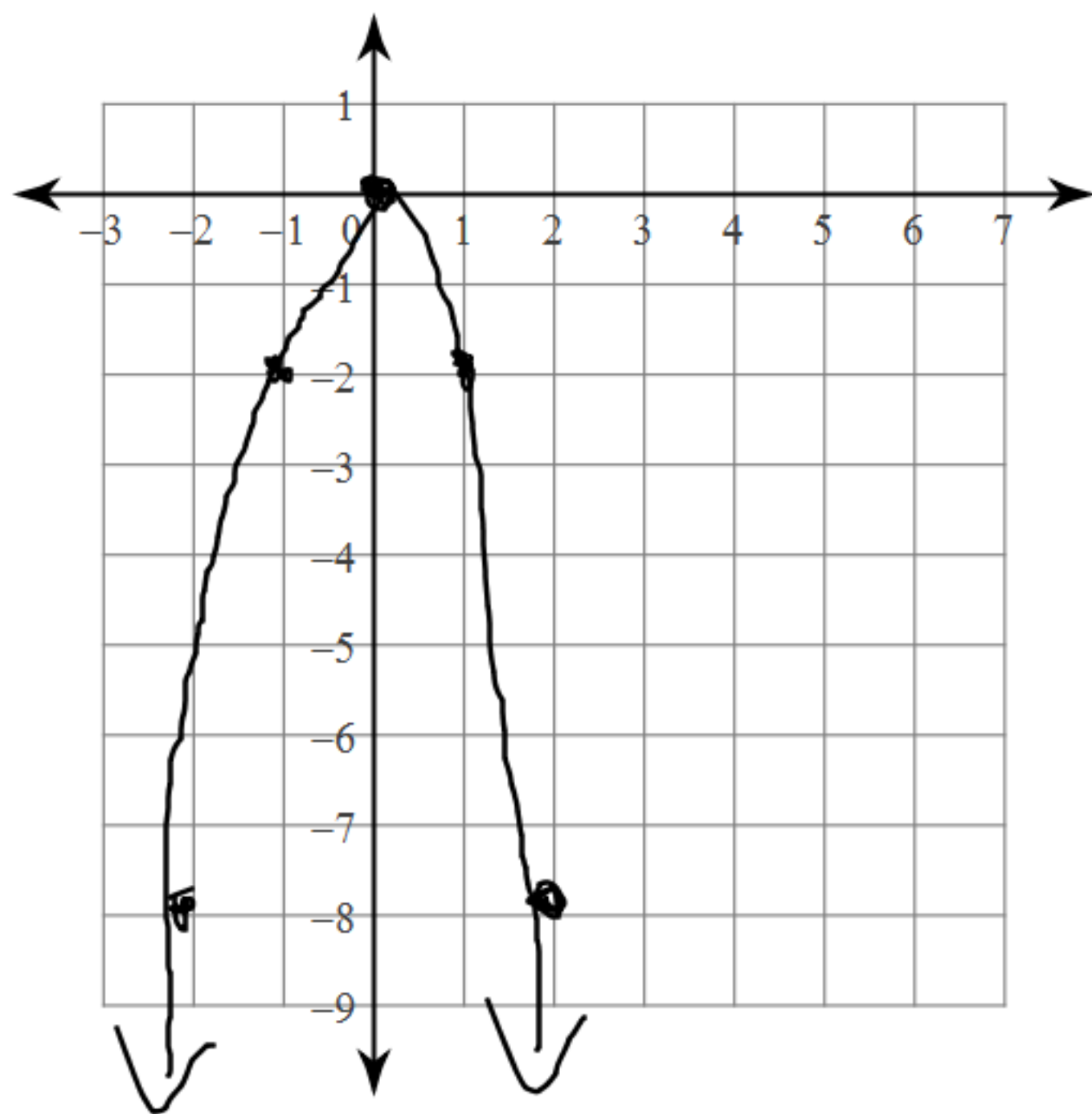


3) $y = -2x^2$



Handwritten work showing the area of a rectangle:

1 (width) $\times$ 2 (height) = 2

2 (width) $\times$ 3 (height) = 6

Total area = 2 + 6 = 8

Sketch the graph of each function.

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

$$\begin{array}{r} \textcircled{x}^3 \\ \textcircled{+} - 4 \\ \hline -3, -1 \end{array}$$

① Zeroes

$$\frac{2x^2}{2} - \frac{8x}{2} + \frac{6}{2} = 0$$

$$2(x^2 - 4x + 3) = 0$$

$$2(x-3)(x-1) = 0$$

$$\begin{array}{l} x-3=0 \\ x=3 \end{array}$$

$$\begin{array}{l} x-1=0 \\ x=1 \end{array}$$

$$\text{zeroes} = \{3, 1\}$$

② Y-int

$$\begin{aligned} y &= 2(0)^2 - 8(0) + 6 \\ y &= 6 \end{aligned}$$

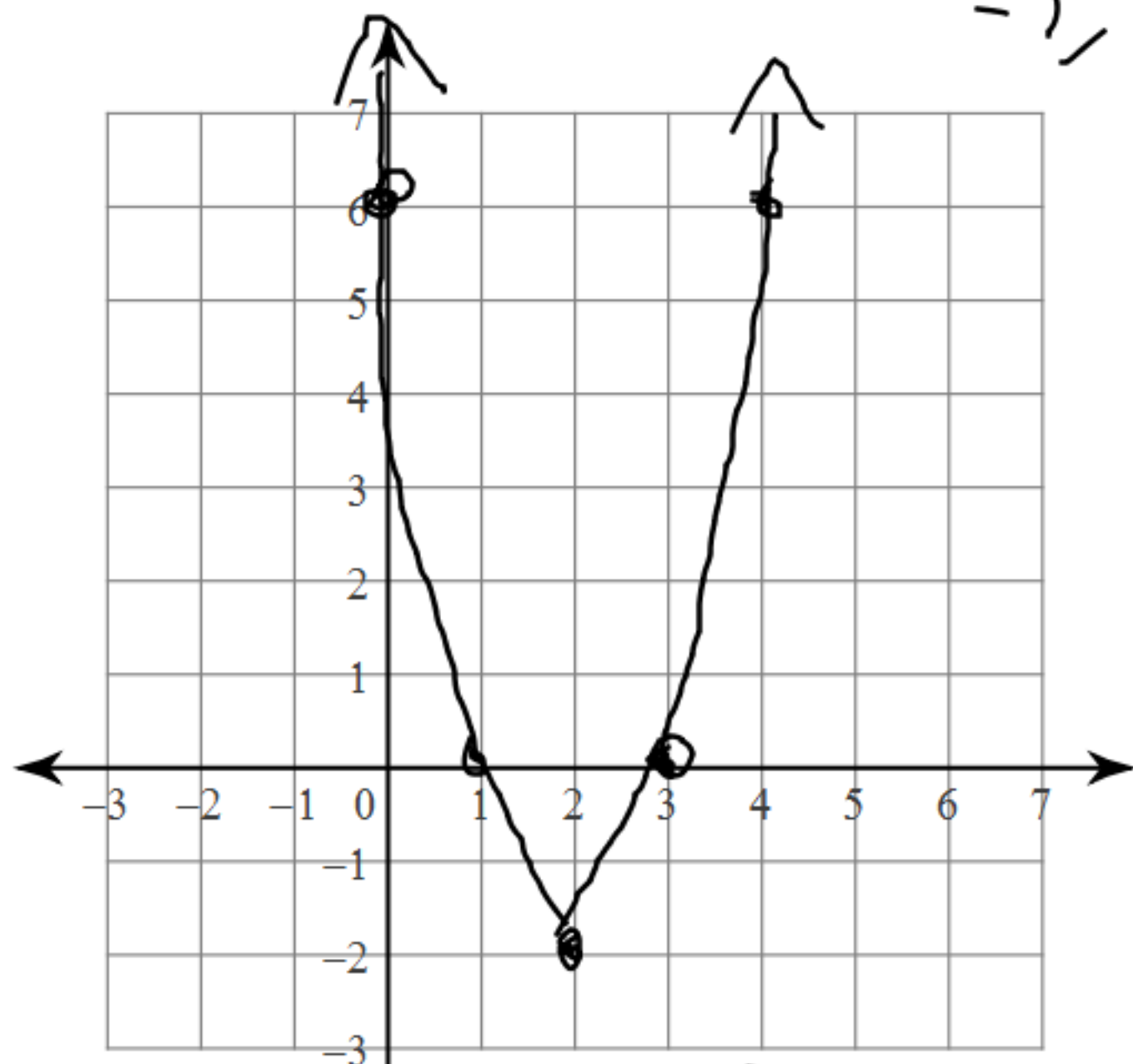
Vertex

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

$$y = 8 - 16 + 6$$

$$y = -2$$

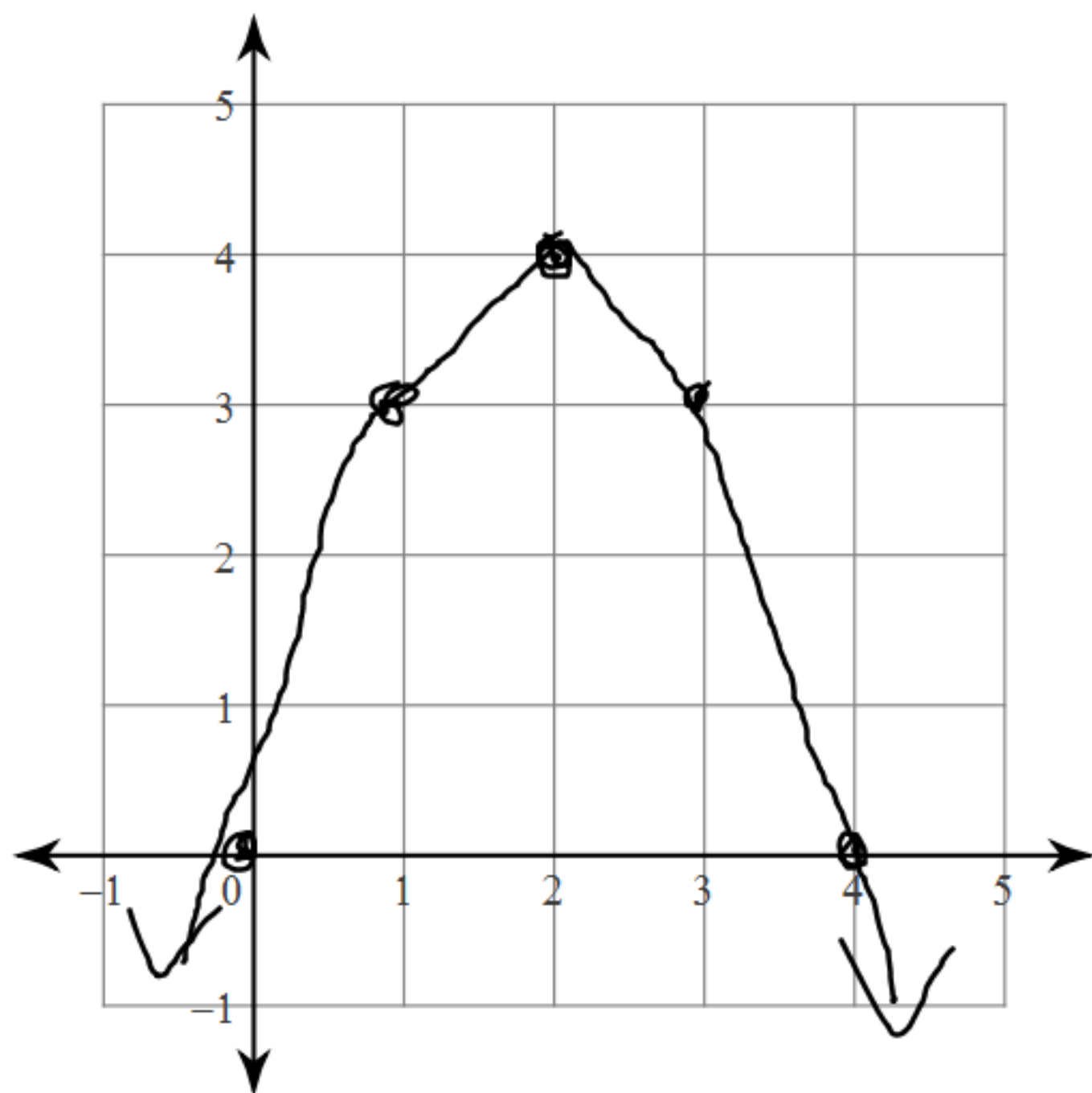
$$(2, -2)$$



3)

Sketch the graph of each function.

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



① Zeros

$$\frac{-x^2}{-x} + \frac{4x}{-x} = 0$$

$$-x(x - 4) = 0$$

$$-x = 0$$

$$x - 4 = 0 \quad \{0, 4\}$$

② y-int

$$y = -(0)^2 + 4(0)$$

$$y = 0$$

③ Vertex

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

$$y = -4 + 8$$

$$y = 4 \quad (2, 4)$$