

Solve the inequality and verify your results by sketching a graph of the quadratic.

$$\frac{-b}{2a} = \frac{-1}{2(2)} = -\frac{1}{4}$$

$$f\left(-\frac{1}{4}\right) = -6.125$$

$$2x^2 + x - 6 \geq 0$$

$$x = \frac{-1 \pm \sqrt{1^2 - 4(2)(-6)}}{2(2)}$$

$$x = \frac{-1 \pm \sqrt{49}}{4}$$

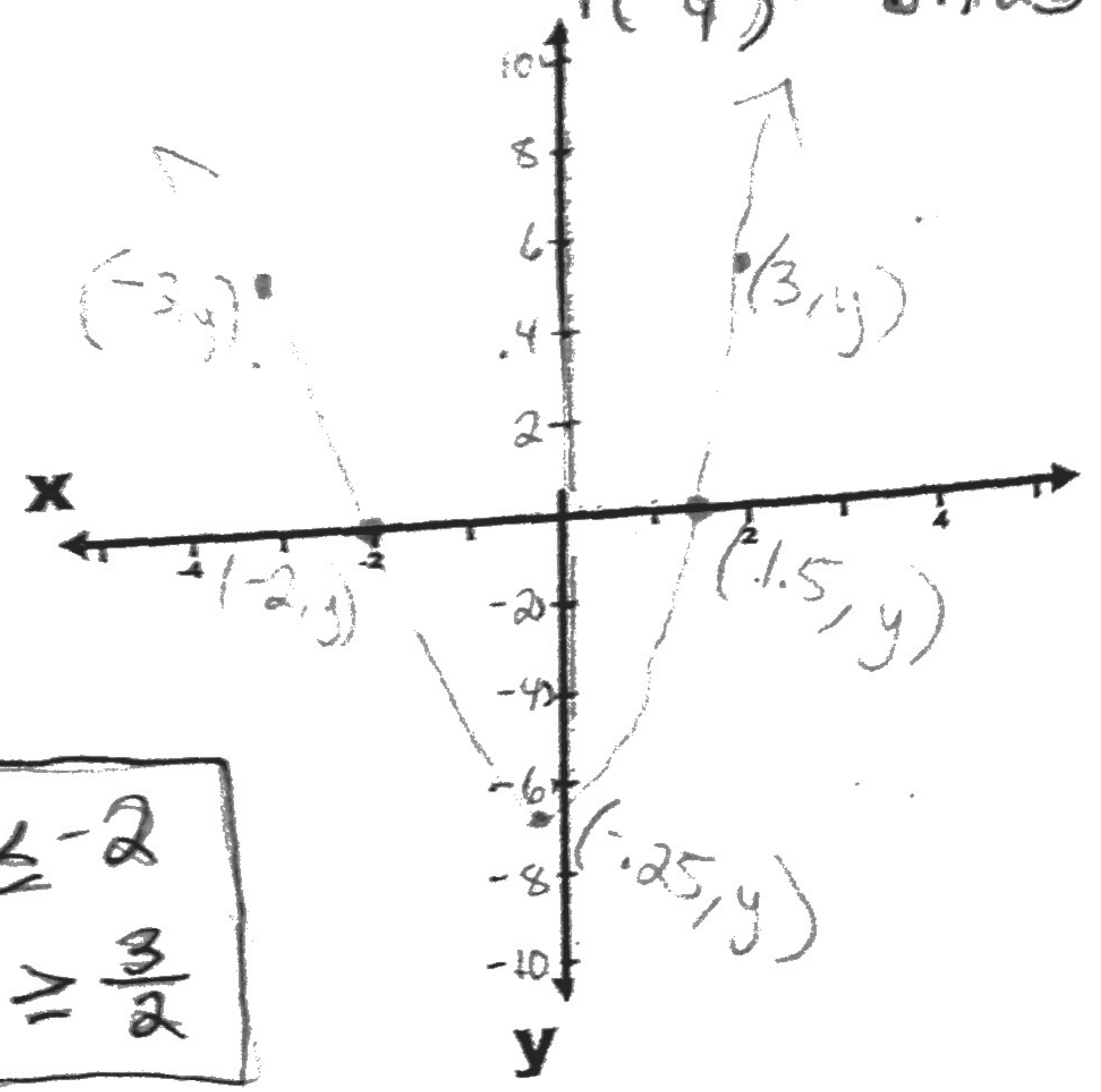
$$x = \frac{-1 \pm 7}{4}$$

$$\frac{6}{4} = \frac{3}{2}$$

$$\frac{-8}{4} = -2$$

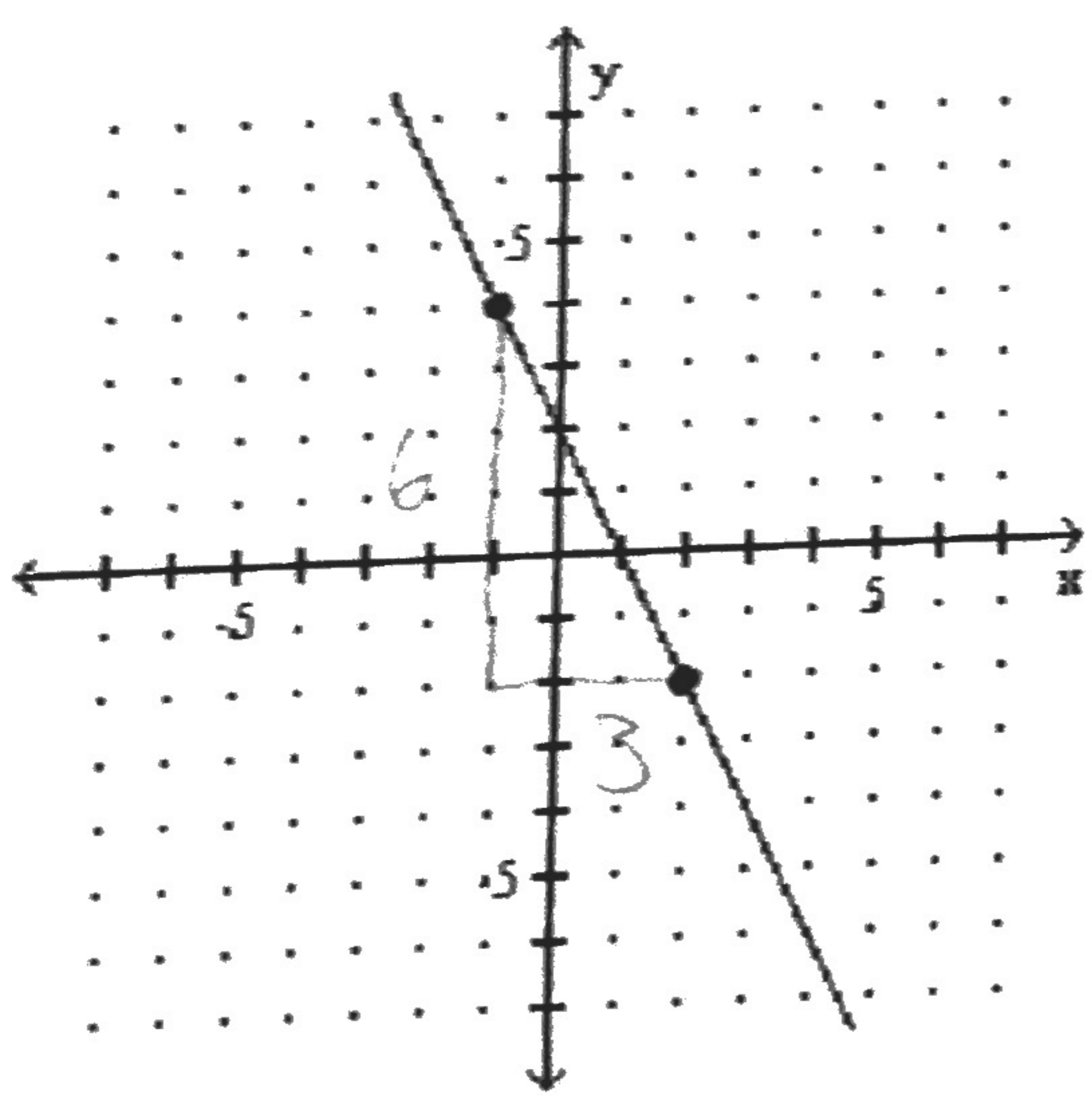
$$x \leq -2$$

$$x \geq \frac{3}{2}$$



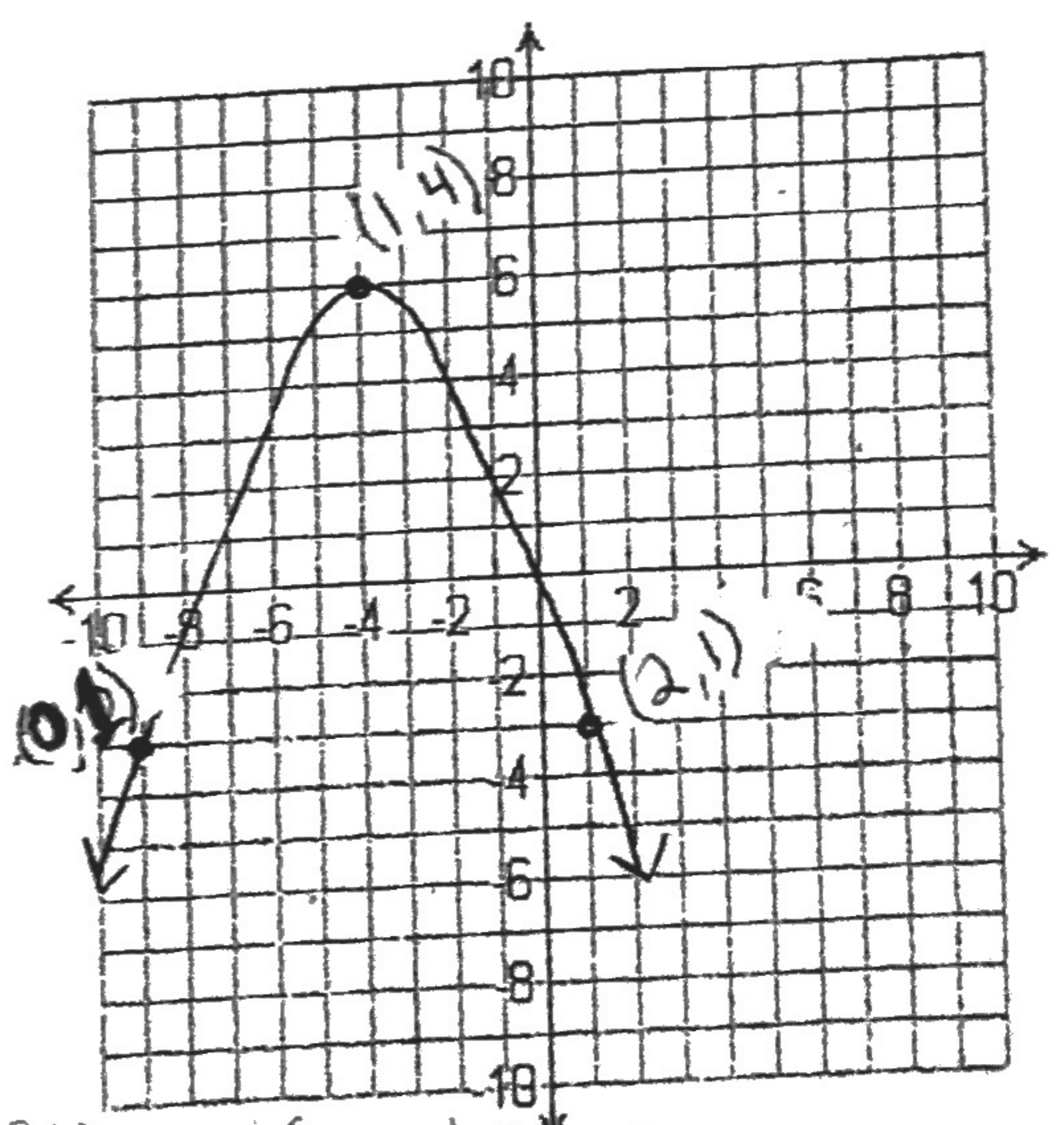
Write the equation of each function graphed below.

5.



$$y = -2x + 6$$

6.



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

$$1 = a(0-1)^2 + 4$$

$$1 = 1a + 4$$

$$-3 = a$$

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