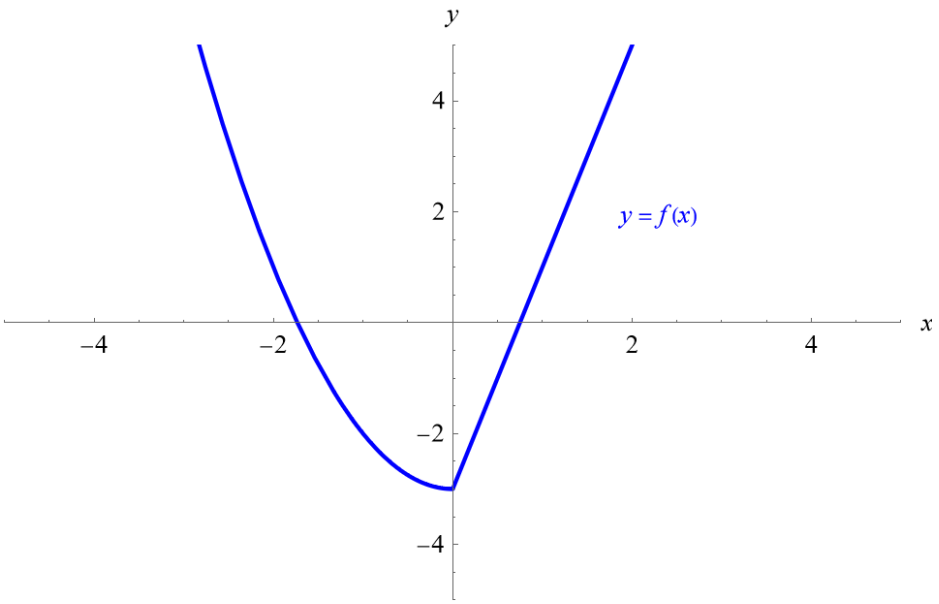
Exercise 95

For the following exercises, for each of the piecewise-defined functions, a. evaluate at the given values of the independent variable and b. sketch the graph.

$$f(x) = \begin{cases} x^2 - 3, & x < 0 \\ 4x - 3, & x \geq 0 \end{cases}; \; f(-4); \; f(0); \; f(2)$$

Solution



$$f(-4) = (-4)^2 - 3 = 16 - 3 = 13$$

$$f(0) = 4(0) - 3 = 0 - 3 = -3$$

$$f(2) = 4(2) - 3 = 8 - 3 = 5$$