

Exercise 49

For the following exercises, graph the given functions by hand.

$$f(x) = |3x + 9| + 2$$

Solution

Rewrite the function to graph it more easily.

$$\begin{aligned} f(x) &= |3(x + 3)| + 2 \\ &= 3|x + 3| + 2 \end{aligned}$$

This way it's apparent the graph is shifted to the left by 3 units, shifted up by 2 units, and has a rise-over-run of 3.

