Exercise 50

For the following exercises, sketch a graph of the given function.

$$f(x) = 5\sqrt{-x} - 4$$

Solution

The parent function is the square root function.

$$\sqrt{x}$$

Replacing x with $-x$ reflects the graph over the y-axis.

$$\sqrt{-x}$$

Multiplying the function by 5 vertically stretches the graph by a factor of 5.

$$5\sqrt{-x}$$

Subtracting 4 from this function shifts the graph down by 4 units.

$$5\sqrt{-x} - 4$$