

Exercise 77

For the following exercises, describe how the formula is a transformation of a toolkit function. Then sketch a graph of the transformation.

$$a(x) = \sqrt{-x + 4}$$

Solution

Rewrite the function.

$$a(x) = \sqrt{-(x - 4)}$$

Start with the parent function.

$$\sqrt{x}$$

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

$$\sqrt{-x}$$

Replacing x with $x - 4$ shifts the graph to the right by 4 units.

$$\sqrt{-(x - 4)}$$

