Exercise 10

For the following exercises, find the domain of each function using interval notation.

$$f(x) = \sqrt{4 - 3x}$$

Solution

You can't take the square root of a negative number, so it's necessary that

$$4 - 3x \geq 0.$$

Subtract 4 from both sides.

$$-3x \geq -4$$

Divide both sides by -3.

$$x \leq \frac{4}{3}$$

Therefore, the domain is

$$\left(-\infty, \frac{4}{3}\right].$$

This is reflected in the graph of $f(x)$ versus x.