

## Exercise 6

Write the domain of the function  $f(x) = \sqrt{3-x}$  in interval notation.

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### Solution

The square root of a negative number cannot be taken, so the number under the square root must be a nonnegative number.

$$3 - x \geq 0$$

Subtract 3 from both sides.

$$-x \geq -3$$

Multiply both sides by  $-1$ .

$$x \leq 3$$

Therefore, the domain of the function in interval notation is  $(-\infty, 3]$ .