

4.14

Domain of a Real Function

• Example 1

Graph the domain of the function

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

on the real number line.

$f(x)$ is defined for any real number x such that

$$-x + 3 \geq 0$$

$$\text{or } x \leq 3$$

The domain of f is thus the set of all the real numbers less than or equal to 3.

The graph is given below.

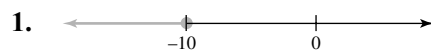


• • • CHECK YOURSELF 1

Graph the domain of the function

$$u(x) = \sqrt{-x - 10}$$

• • • CHECK YOURSELF ANSWER



4.14 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

Graph the domain of each of the following functions on the real number line.

1. $g(x) = \sqrt{x + 9}$

2. $h(t) = \sqrt{-t + 2}$

3. $f(x) = \sqrt{10 - x}$

4. $h(s) = \sqrt{2s - 9}$

5. $k(z) = -\sqrt{4z + 6}$

6. $u(v) = -\sqrt{-8v + 3}$

7. $s(t) = \sqrt{18 - 3t}$

8. $p(q) = \sqrt{100q - 50}$

9. $g(y) = \sqrt{29 - 4y}$

10. $h(x) = \sqrt{4x - 12}$

11. $f(t) = \sqrt{14 - 3t}$

12. $s(x) = \sqrt{13 - 4x}$