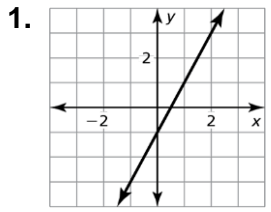


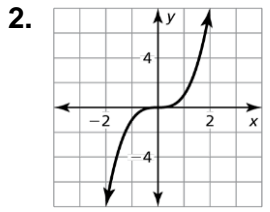
# 3.1 & 3.2

## Day 2 - Practice

In Exercises 1 - 3, determine whether the graph or table represents a *linear* or *nonlinear* function. Explain.



\_\_\_\_\_



\_\_\_\_\_

3. 

<b>x</b>	1	4	7	10
<b>y</b>	2	5	6	10

\_\_\_\_\_

In Exercises 4–6, determine whether the equation represents a *linear* or *nonlinear* function.

4.  $y = \sqrt{x} + 5$

\_\_\_\_\_

5.  $y = 4x - 2$

\_\_\_\_\_

6.  $y = x^2 - 49$

\_\_\_\_\_

7. Explain how you know if it is linear.

8. Fill in the table so it represents a linear function.

<b>x</b>	4	8	12	16	20
<b>y</b>	-4				12

9. The function  $y = 3.5x + 2.8$  represents the cost  $y$  (in dollars) of a taxi ride of  $x$  miles.

a. Identify the independent and dependent variables.

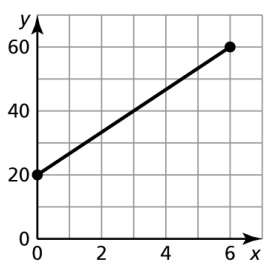
b. You have enough money to travel at most 20 miles in the taxi. Find the domain and range of the function.

Domain:

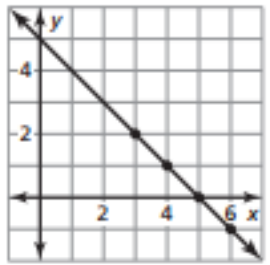
Range:

In Exercises 10 - 12, state the domain of the following graphs.

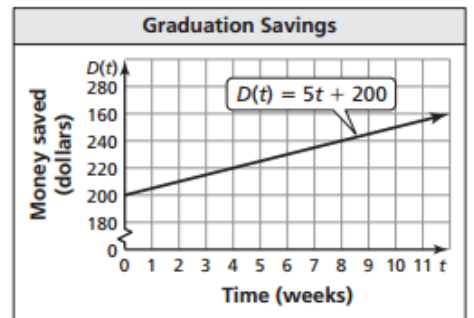
10. Domain:



11. Domain:

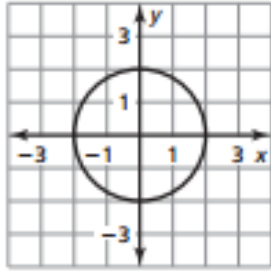


12. Domain:

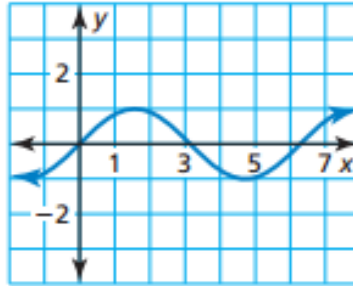


In Exercises 13 - 15, state the range of the following graphs.

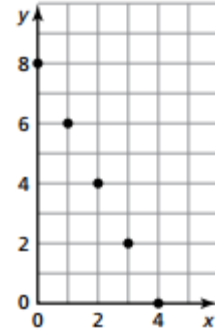
13. Range:



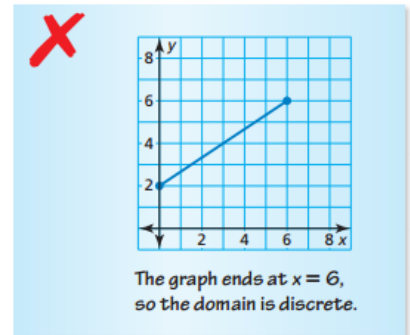
14. Range:



15. Range:

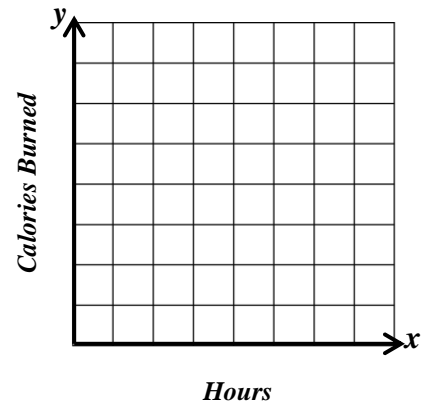


18. Describe and correct the error in determining whether the table or graph represents a linear function.



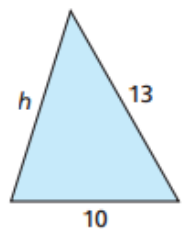
19. The number  $y$  of calories burned after  $x$  hours of rock climbing is represented by the linear function  $y = 650x$ .

- Find the domain of the function.
- Is the domain discrete or continuous? Explain.
- Graph the function using its domain.
- Find the range of the function.



20. Consider the triangle shown.

- Write a function that represents the perimeter of the triangle.
- Identify the independent and dependent variables.



c. Describe the domain and range of the function. (Hint: The sum of the lengths of any two sides of a triangle is greater than the length of the remaining side.)