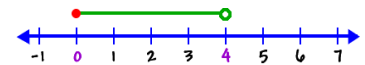
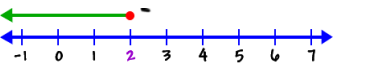
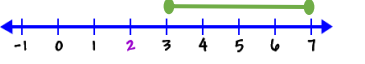
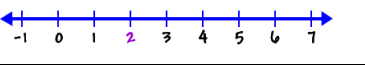



8.4 Domain and Range of Functions

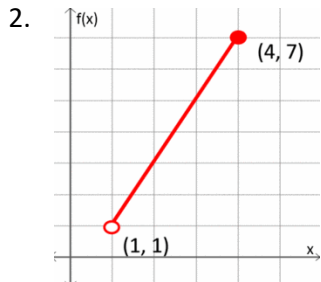
Name: _____

Hour: _____

1. Complete the table.

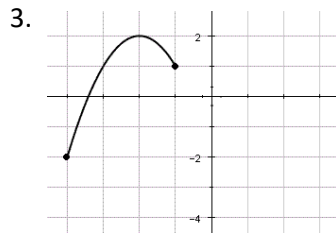
Number Line	Inequality	Interval Notation
		$[0, 4)$
	$x \leq 2$	
	$3 \leq x \leq 7$	
		$(1, \infty)$
		

Write the domain and the range of the function using interval notation.



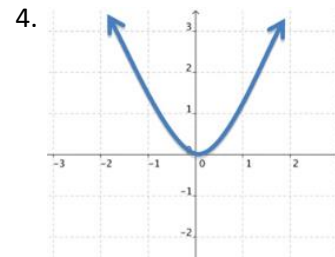
Domain: _____

Range: _____



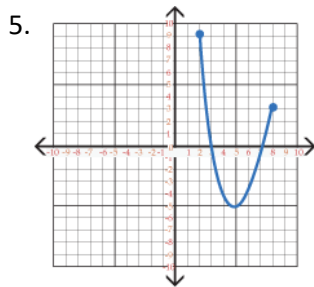
Domain: _____

Range: _____



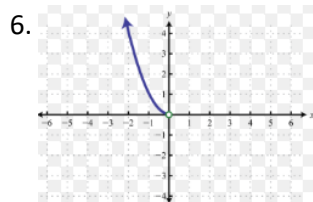
Domain: _____

Range: _____



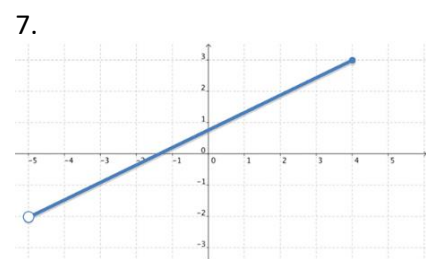
Domain: _____

Range: _____



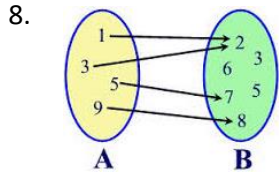
Domain: _____

Range: _____

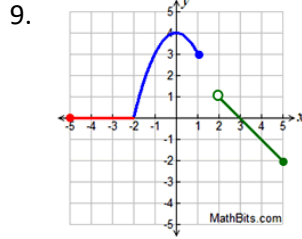


Domain: _____

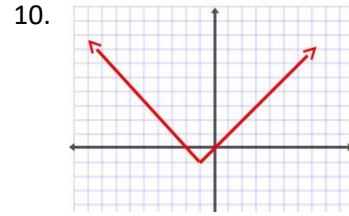
Range: _____



Domain: _____
Range: _____



Domain: _____
Range: _____



Domain: _____
Range: _____

11.

X	Y
1	6
2	6
3	6
7	6

Domain: _____
Range: _____

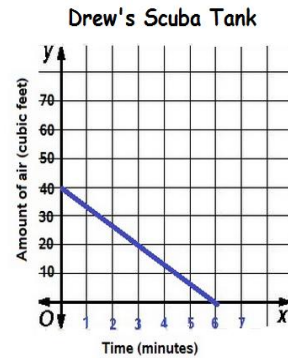
12. $\{(-1, 0), (0, 3), (2, -3), (3, 0)\}$

Domain: _____
Range: _____

13. $\{(1, 6), (2, 3), (4, 3), (5, 7)\}$

Domain: _____
Range: _____

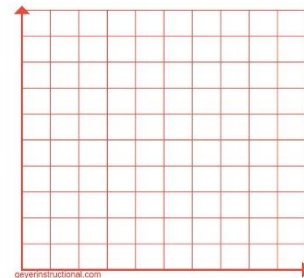
14. Drew is going scuba diving. He has a scuba tank with 40 cubic feet of air, and he uses the air at a rate of 6.67 cubic feet per minute. (see the graph at the right)



- What is the domain of this function?
- What does the domain mean, in the context of this problem?
- What is the range of the function?
- What does the range mean, in the context of the problem?

15. A bicyclist travels at a constant speed of 8 miles per hour for 45 minutes.

- Sketch a graph to model the scenario.
- Use interval notation to describe the domain and the range.



16. Tara's car travels about 25 miles on one gallon of gas. She has between 10 and 12 gallons of gas in the tank. Find the reasonable domain and range values.

Determine the Domain of the following functions:

$$17. g(x) = \frac{3}{x+5}$$

$$18. f(x) = \frac{4x}{x+8}$$

$$19. f(x) = x^2 + 16$$

$$20. f(x) = \frac{3-x}{x-2}$$

$$21. f(x) = x^2 + 3$$

$$22. f(x) = \sqrt{x+5}$$

$$23. g(x) = \sqrt{x-7}$$

$$24. g(x) = \sqrt{x}$$