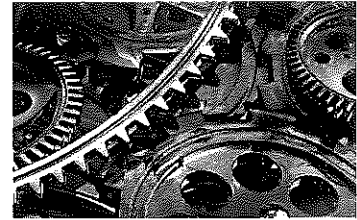
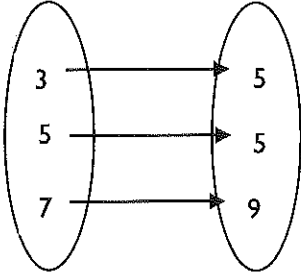


3.7 To Function or Not to Function

A Practice Understanding TaskCC BY Peter Pham
<https://fltc.kr/p/CnQMik>

Identify the two variables for each situation and determine which is independent and which is dependent. Then, determine if the relationship is a function and justify your reasoning.

1. A person's name versus their social security number.	2. A person's social security number versus their name.	3. The cost of gas versus the amount of gas pumped.										
4. $\{(3,6), (4, 10), (8,12)\}$	5. The temperature in degrees Fahrenheit with respect to the time of day.	6. <table border="1" data-bbox="1003 1016 1289 1194"> <thead> <tr> <th>distance</th> <th>days</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>2</td> </tr> <tr> <td>10</td> <td>4</td> </tr> <tr> <td>6</td> <td>5</td> </tr> <tr> <td>9</td> <td>8</td> </tr> </tbody> </table>	distance	days	6	2	10	4	6	5	9	8
distance	days											
6	2											
10	4											
6	5											
9	8											
7. The area of a circle as it relates to the radius.	8. 	9. The volume of water in a given cylinder is dependent on the height of water in cylinder.										

SECONDARY MATH I // MODULE 3
FEATURES OF FUNCTIONS - 3.7

10. The size of the radius of a circle dependent on the area.	11. Students letter grade dependent on the percent earned.	12. The length of fence needed with respect to the amount of rectangular area to be enclosed.
13. The explicit formula for the recursive situation below: $f(1) = 3$ and $f(n + 1) = f(n) + 4$	14. If x is a rational number, then $f(x) = 1$ If x is an irrational number, then $f(x) = 0$	15. The national debt with respect to time.

READY, SET, GO!

Name _____

Period _____

Date _____

READY

Topic: Determine domain and range and whether the relation is a function or not.

Determine if each set of ordered pairs is a function or not and then state the domain and range.

Determine if each set of ordered pairs is a function, then state the domain and range.

1. $\{(-7, 2), (3, 5), (8, 4), (-6, 5), (-2, 3)\}$

Function: Yes / No

Domain: _____

Range: _____

2. $\{(9, 2), (0, 4), (4, 0), (5, 3), (2, 7), (0, -3), (3, -1)\}$

Function: Yes / No

Domain: _____

Range: _____

3. $\{(1, 2), (2, 3), (3, 4), (4, 5), (5, 6), (6, 7), (7, 8), (8, 9)\}$

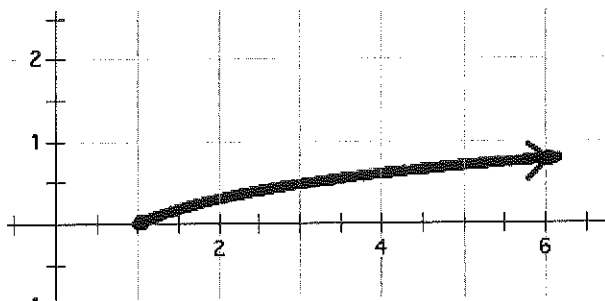
Function: Yes / No

Domain: _____

Range: _____

Determine the domain and range for each of the given functions.

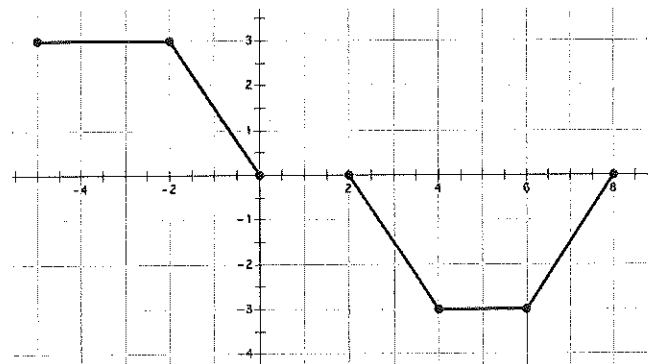
4.



Domain: _____

Range: _____

5.



Domain: _____

Range: _____

6. $f(x) = -2x + 7$

Domain:

Range:

7. $g(x) = 3(5)^x$

Domain:

Range:

8. The elements in the table define the entire function.

Domain:

Range:

x	h(x)
1	9
2	98
3	987
4	9876

SET

Topic: Determine whether or not the relationship is a function.

Determine the domain and range then determine whether or not the relationship is a function.

- The distance a person is from the ground related to time as they ride a Ferris Wheel.
- The amount of daylight during a day throughout the calendar year.
- The value of a Volkswagen Bug convertible from time of first purchase in 1978 to now.
- A person's name and their phone number.
- The stadium in which a football player is playing related to the outcome of the game.

GO

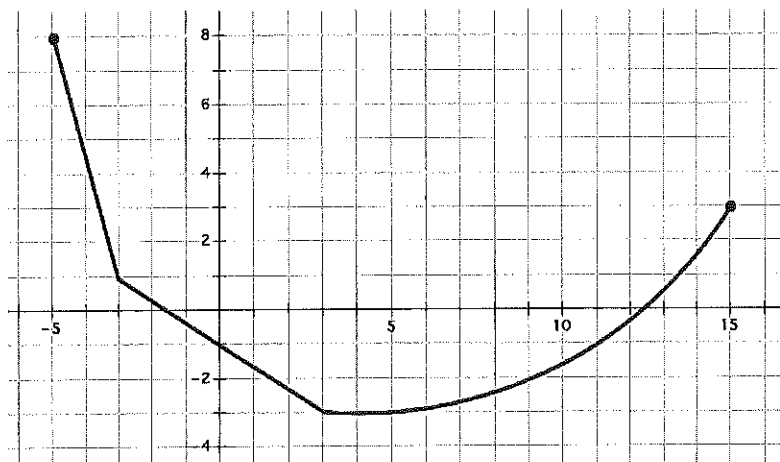
Topic: Determine the features of functions.

14. Describe the function in the graph.

Write the intervals where it is decreasing and/or increasing.

Identify the min and/or max.

State the domain and range.



15. For each situation use the given function to find and interpret solutions.

Hope has been tracking the progress of her family as they travel across the country, she knows they are driving 78 miles per hour, during their vacation and she has created a function, $d(t) = 78t$ to model the progress they are making.

- What would Hope be attempting to find if she writes $d(4) = 78(4)$?
- What would the expression $d(t) = 450$ mean in this situation?
- What would the expression $d(3.5)$ mean in this situation?
- How could Hope use the function to find the time it would take to travel 800 miles?

16. Use the given representation of the functions to answer the questions.

- Where does $f(x) = g(x)$?
- What is $g(0) + f(0)$?
- On what interval(s) is $g(x) > f(x)$?
- What is $g(-8) + f(-8)$?

