

Objective: Students will be able to find the domain and range of a graph.

Standards:

- **MAFS.912.F-IF.1.2:** Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
- **MAFS.912.F-IF.1.1:** Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x . The graph of f is the graph of the equation $y = f(x)$.
- **MAFS.912.F-IF.2.5:** Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.

Introduction: Students will watch the video about how to find the domain and range of a graph and write the definitions *relation*, *domain*, and *range*.

Materials:

- Pencils
- Activity Guide
- Printed graphs in protective sleeve
- Dry erase markers
- Computer set up to show a you-tube video <https://www.youtube.com/watch?v=fyROLkZc75E>

Guided Practice: Students will be in groups and will be asked to find the domain and range of the graphs. It is recommended to make a copy of the activity for each group and place it inside of a clear protector. Students may use a dry erase marker to find the domain and range. (this can be wiped off easily for the next group of students. Students may draw lines to the x and y axis to help them see where the domain and range is located on the graph. Students will then write the domain and range at the bottom of the graph. Once students all agree on their answers, they will write their answers on the activity sheet, erase their work and answers, and rotate their question to the next group.

Independent Practice: Students will create their own graph and find the domain and range. Teacher will grade these and may use these questions for upcoming homework, quiz, and test questions.

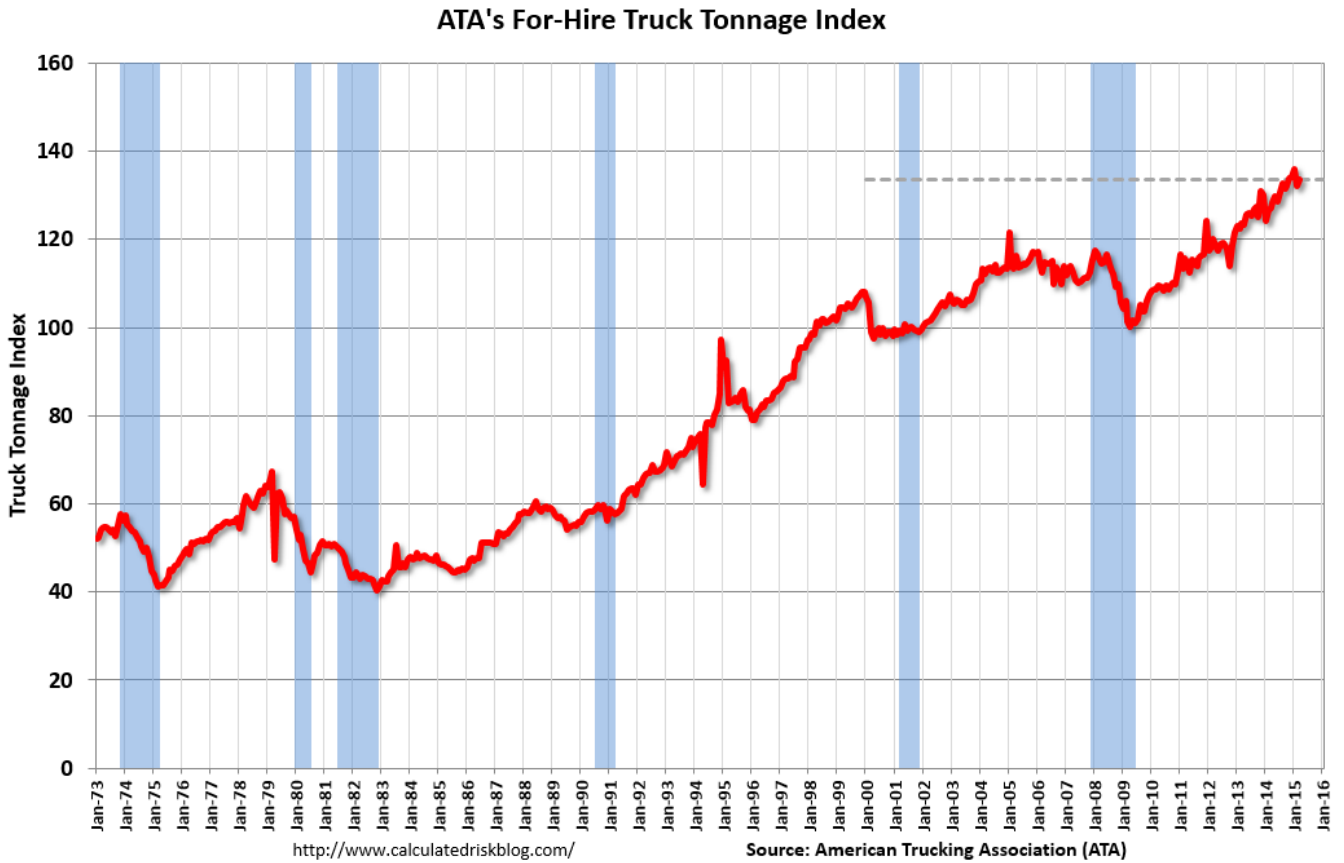
Conclusion: Give students a TOD (Ticket out the Door) – Students are to write how to find the domain and range of a graph on a sticky note.

Additional Resources:

Khan Academy video on how to find domain and range: <https://www.youtube.com/watch?v=sXP7VhU1gYE>

Worksheet for extra practice or homework: <https://www.mathworksheets4kids.com/function/domain-range-graph-easy1.pdf>

#1



Domain:

Range:

Reference:

https://www.bing.com/images/search?view=detailV2&ccid=O6iRT%2fL&id=2B122DE13E0EBBEF2ED08548DDF1B9B3E057BCF7&thid=OIP.O6iRT_iLDb7ah2YDzPuYTgEsDE&q=line+graph+of+trucking+data&simid=607996504097620125&selectedIndex=2&ajaxhist=0

#2

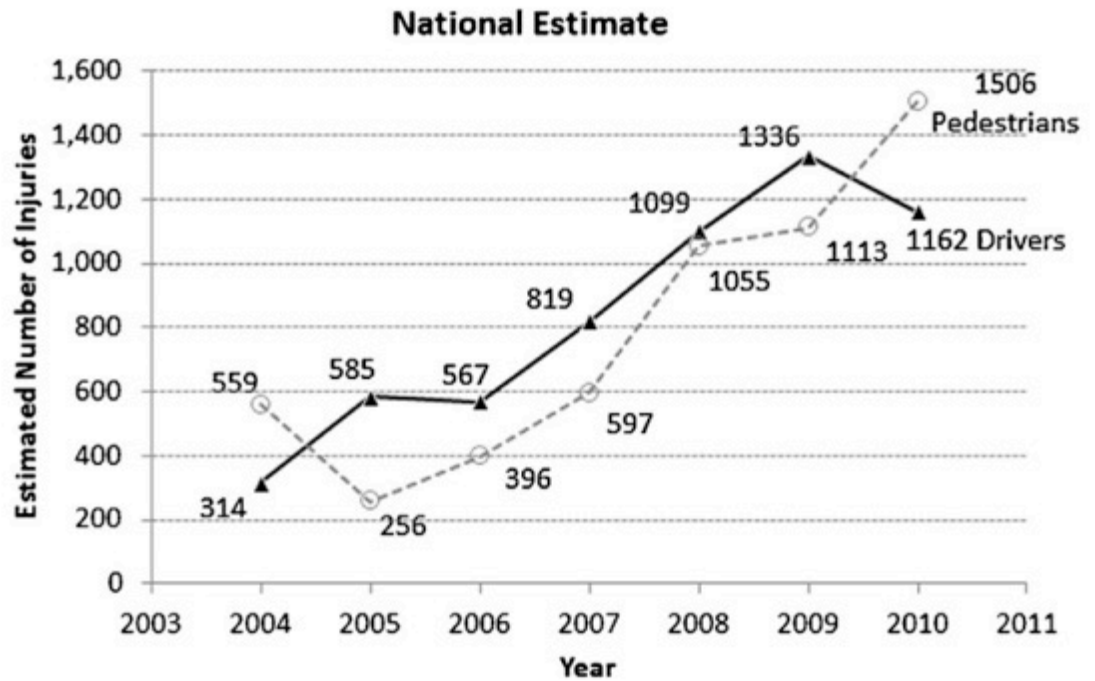


Fig. 1. CPSC national estimate of injuries related to cell phone use among pedestrians and drivers.

Drivers

Domain:

Range:

Reference:

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#3

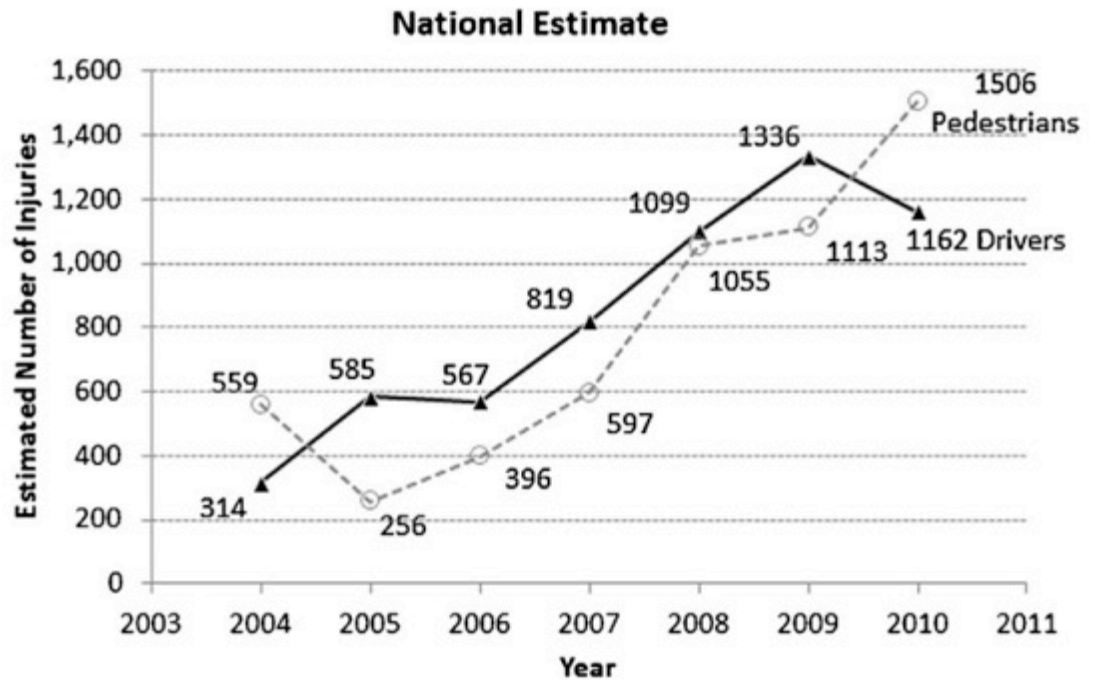


Fig. 1. CPSC national estimate of injuries related to cell phone use among pedestrians and drivers.

Pedestrians

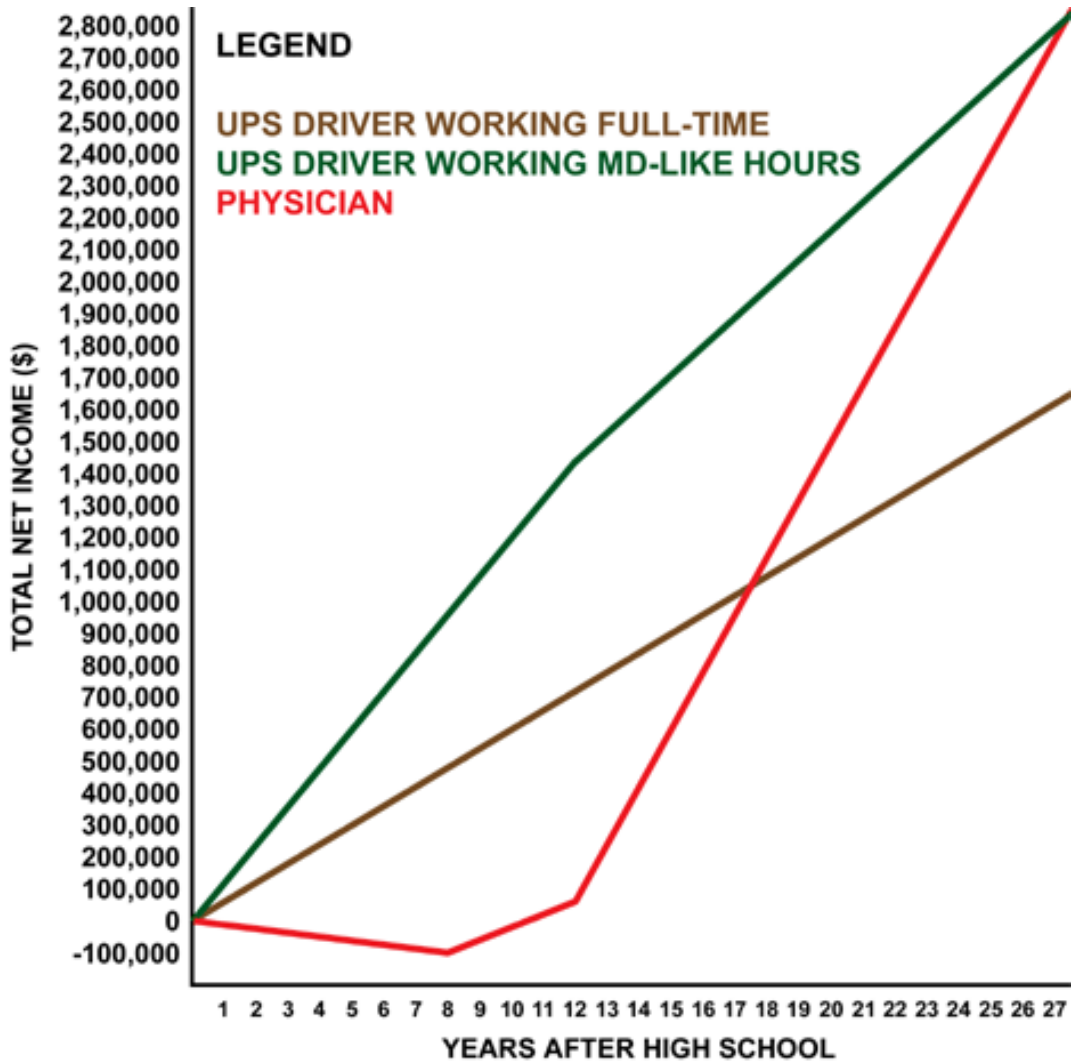
Domain:

Range:

Reference:

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#4

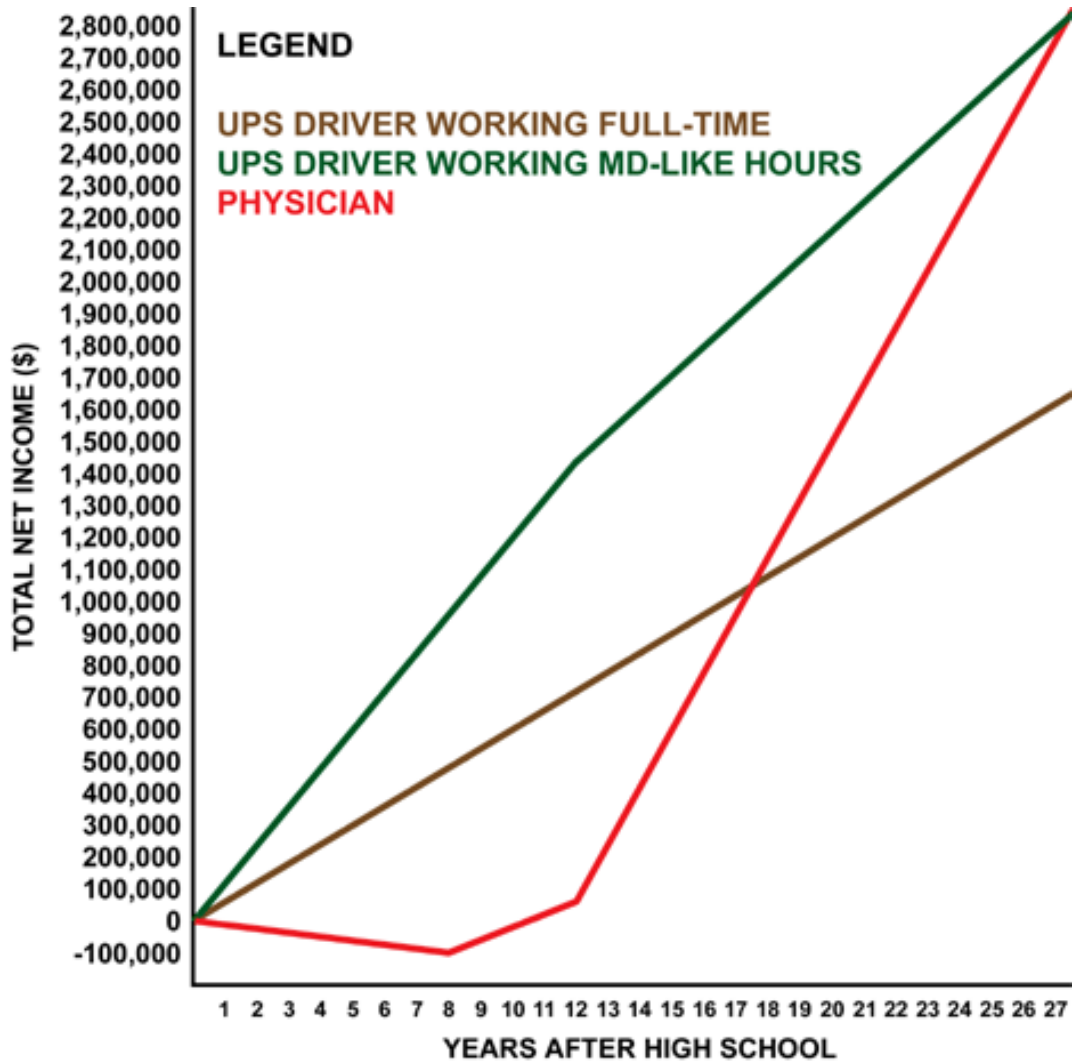


UPS Driver Working Full-Time

Domain:

Range:

#5

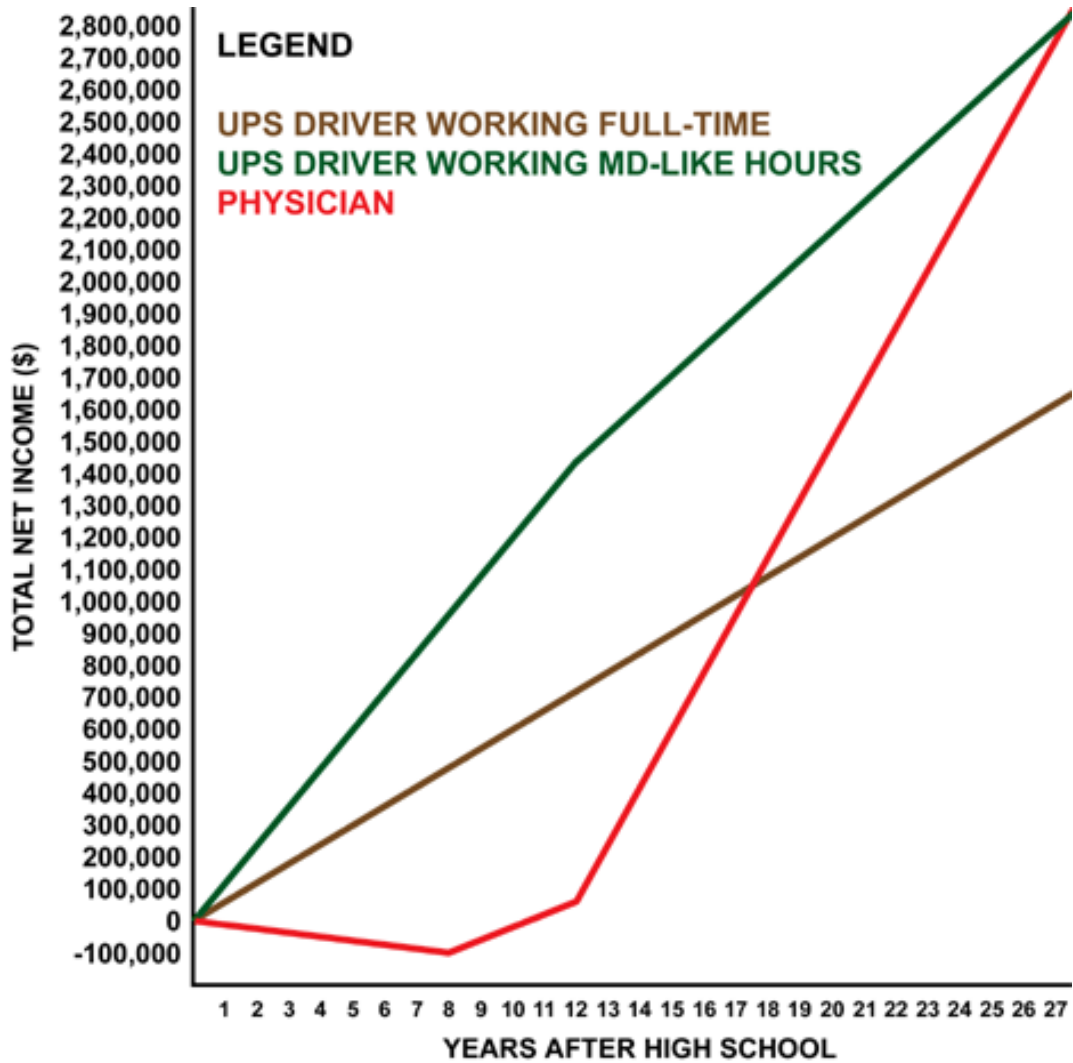


UPS Driver Working MD-Like Hours

Domain:

Range:

#6



Physician

Domain:

Range:

Reference: <http://graphaday.blogspot.com/2010/04/doctor-salary-vs-ups-driver.html>

Algebra 1 Activity Guide

Vocabulary

<u>Term</u>	<u>Definition from video</u>	<u>Definition in my own words</u>
Relation		
Domain		
Range		

Part II

<u>Graph #</u>	<u>Domain</u>	<u>Range</u>
1		
2		
3		
4		
5		
6		

(Click link to visit site and print)

Name : _____

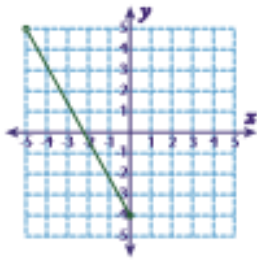
Score : _____

Domain and Range

EST

Find the domain and range for each graph.

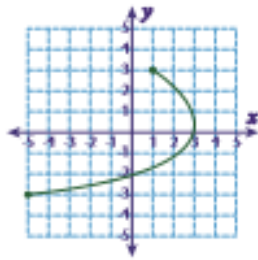
1)



Domain : _____

Range : _____

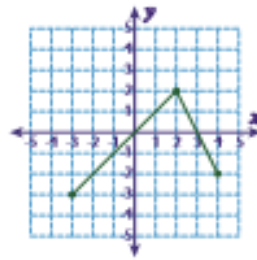
2)



Domain : _____

Range : _____

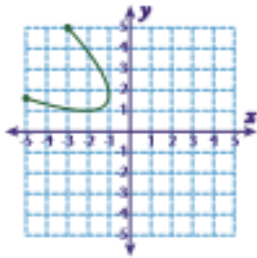
3)



Domain : _____

Range : _____

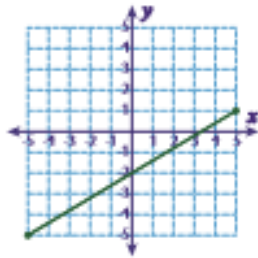
4)



Domain : _____

Range : _____

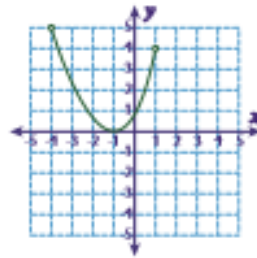
5)



Domain : _____

Range : _____

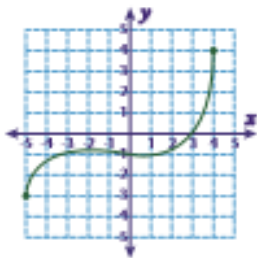
6)



Domain : _____

Range : _____

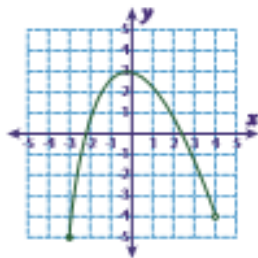
7)



Domain : _____

Range : _____

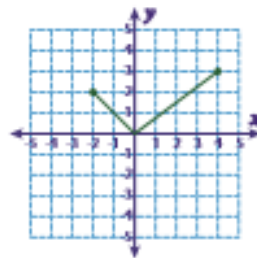
8)



Domain : _____

Range : _____

9)



Domain : _____

Range : _____