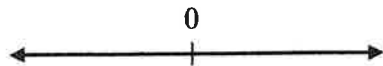


INTERVAL NOTATION WORKSHEET

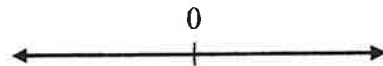
Put in interval notation and draw a graph of each inequality.

1. $x \geq 4$



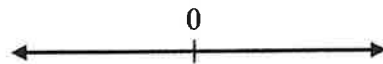
1. _____

2. $x < 6$



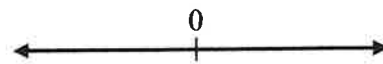
2. _____

3. $x \leq -2$



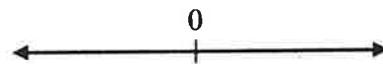
3. _____

4. $x > 8$



4. _____

5. $x < -10$



5. _____

Write each interval as an inequality.

6. $(-\infty, -8]$

6. _____

7. $[5, \infty)$

7. _____

8. $(-2, \infty)$

8. _____

9. $[-10, \infty)$

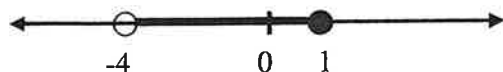
9. _____

10. $(-\infty, 6)$

10. _____

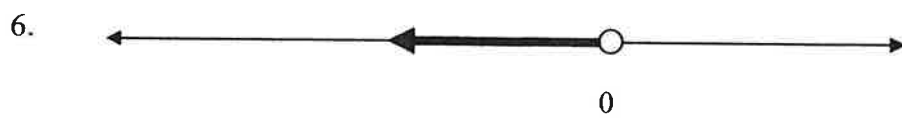
11) Write interval notation that describes the graph.

11) _____



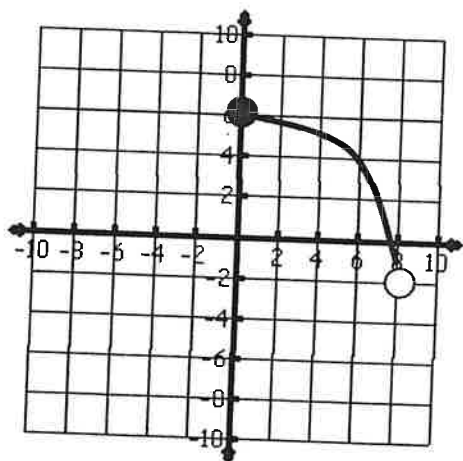
Interval Notation

In each part, express the set in interval notation (a, b)



Use inequality signs to write the domain and range of each graph.

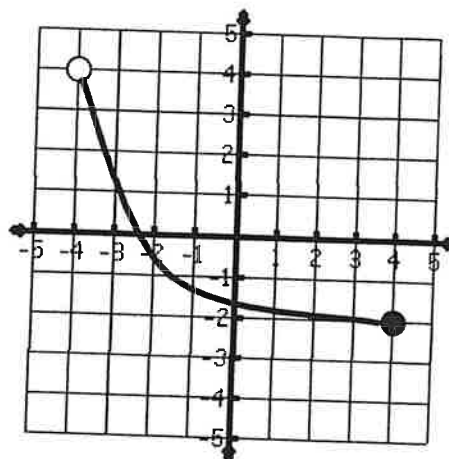
1.



Domain _____

Range _____

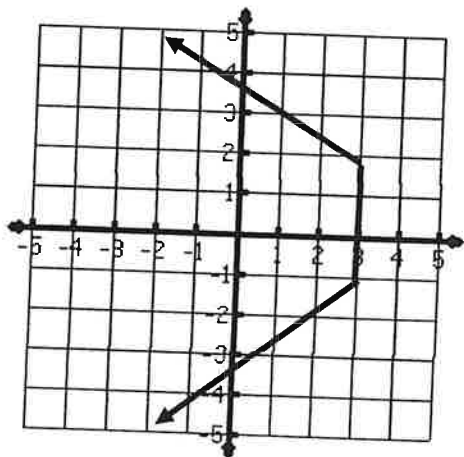
3.



Domain _____

Range _____

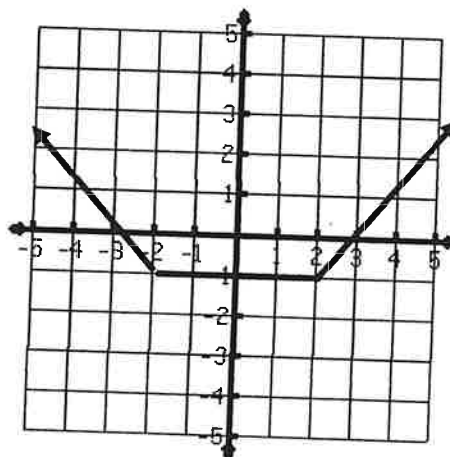
2.



Domain _____

Range _____

4.



Domain _____

Range _____

5. Determine the domain and range of a circle that is graphed with its center at $(0, 0)$ and a radius of 5.

Domain _____

Range _____

Functions

Identify the domain and range of each situation. Then determine if the situation represents a function.

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

domain _____

range _____

function? _____

2. $\{(8, 5), (6, 5), (7, 2)\}$

domain _____

range _____

function? _____

3. $\{(6, 4), (8, -4), (9, 10)\}$

domain _____

range _____

function? _____

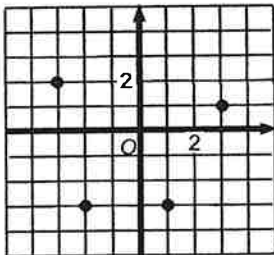
4. $\{(9, 9), (9, 8), (9, 7)\}$

domain _____

range _____

function? _____

5.

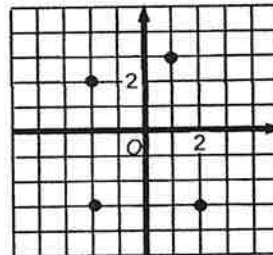


domain _____

range _____

function? _____

6.



domain _____

range _____

function? _____

7. Justin, Mr. Quarterback, collected data on the average number of passing yards he made to each of his receivers in one football game. Determine the domain and range of the data and if it represents a functional relationship.

Receiver	Galindo	Hemphill	Harle	Carrillo	Segovia	Jenkins
Yards	30	42	5	12	10	12

domain _____

range _____

functional relationship? _____

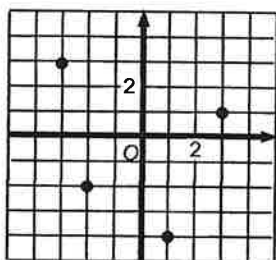
8. The heights and shoe sizes of several people are recorded in the table below. Determine the domain and range of the data and if it represents a functional relationship.

Height	5'10"	5'11"	5'9"	6'1"	5'11"	6'0"
Shoe Size	9	9.5	8.5	12	10	11.5

domain _____

range _____ functional relationship? _____

9. What is the range of the function shown in the graph?

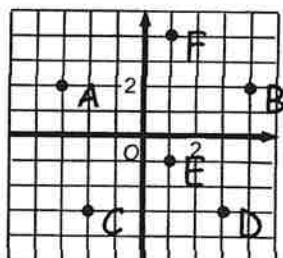


10. How is the following set of ordered pairs related?

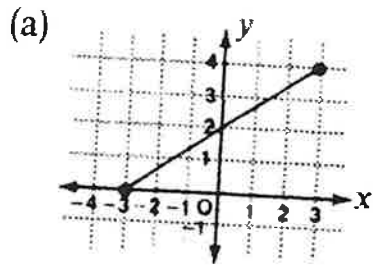
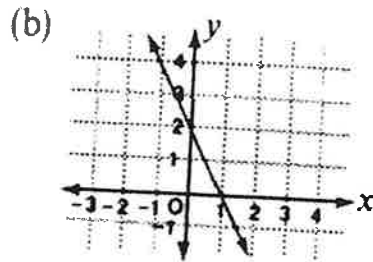
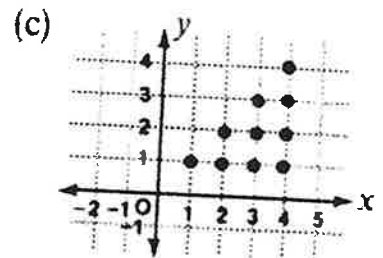
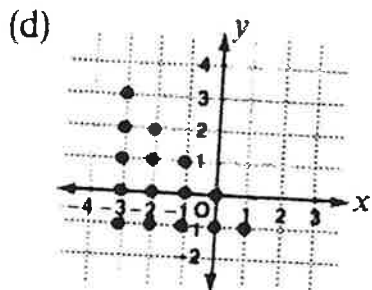
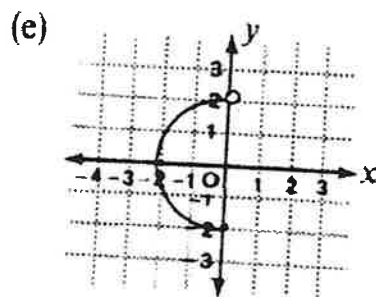
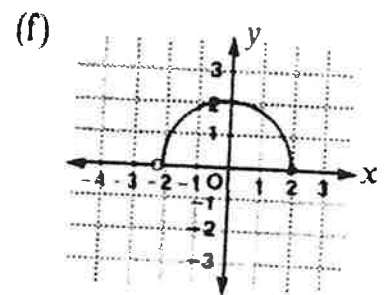
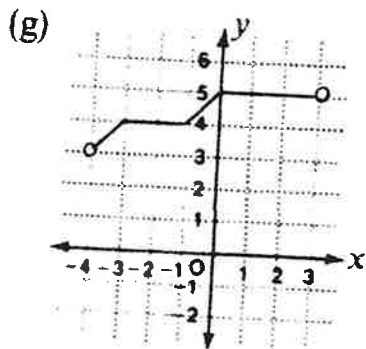
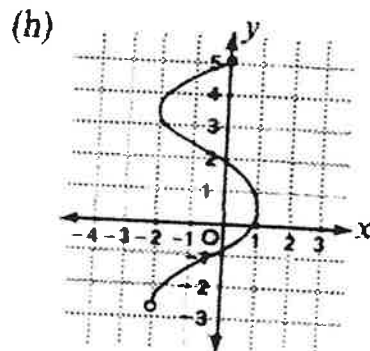
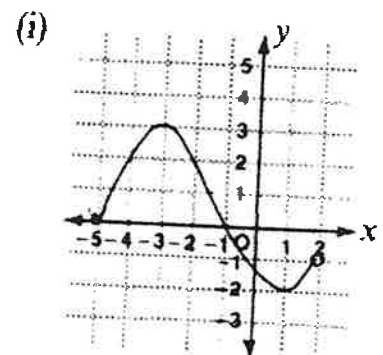
$$\{(0, 2), (1, -1), (2, -4), (3, -7), (4, -10)\}$$

- The first number is multiplied by -2 to obtain the second number.
- The second number is obtained by multiplying the first number by 2 and then subtracting 1 .
- The second number is obtained by multiplying the first number by -3 and then adding 2 .
- The second number is obtained by squaring the first number and then subtracting 3 .

11. Which of the following points, when deleted from the coordinate grid, will result in a relationship that represents a function?



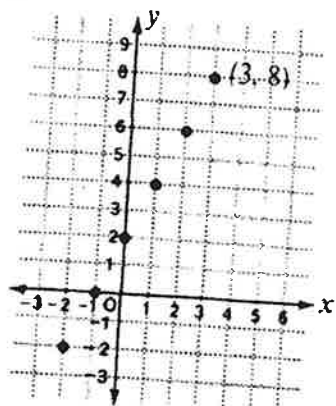
write the domain and range.



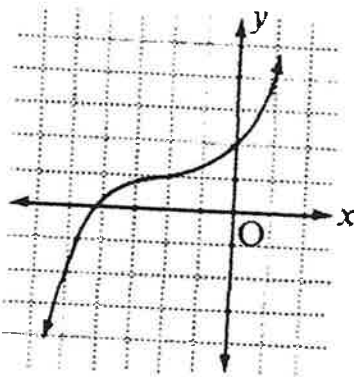
2.4 Domain and Range of a Function

Find the Domain and Range for each of the following functions

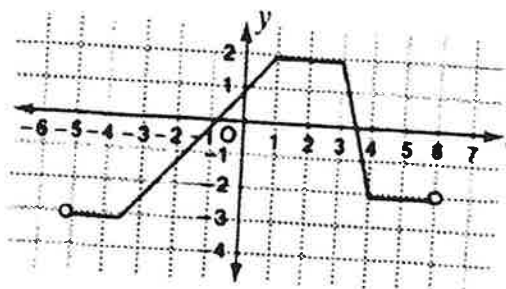
3.



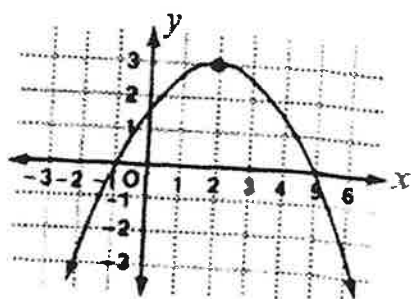
4.



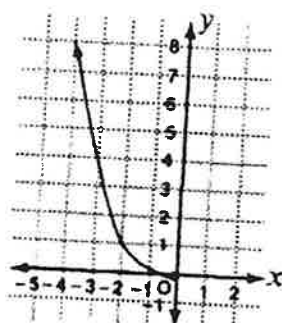
5.



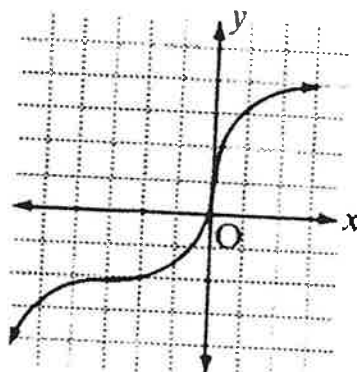
6.



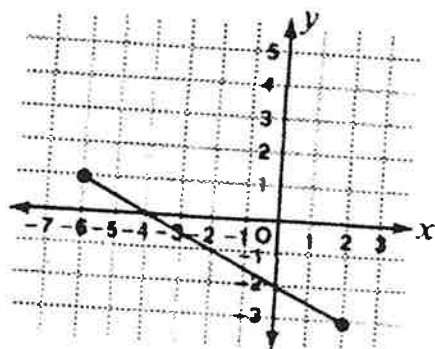
7.



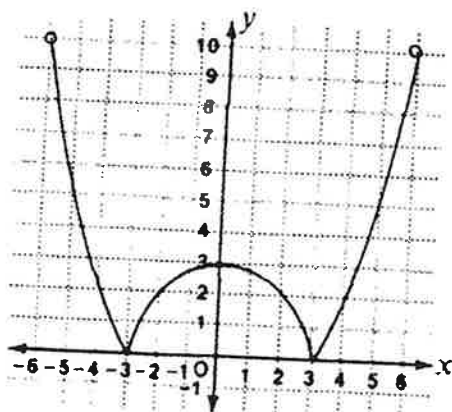
8.



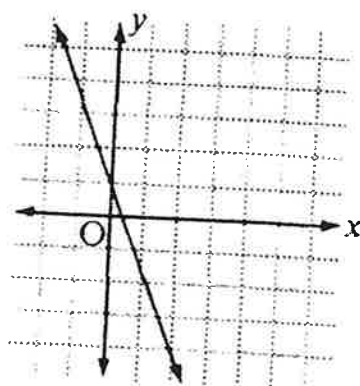
9.



10.



11.



Find the Domain of Each Rational Function. Use inequality or interval notation.

1. $\frac{1}{x+8}$

Domain:

2. $\frac{3}{x^2-4}$

Domain:

3. $\frac{2x^2-4}{x+5}$

Domain:

4. $\frac{x^3}{x^2+1}$

Domain:

5. $\frac{4x}{2x+7}$

Domain:

6. $\frac{-x^2+3}{x^2-9}$

Domain:

7. $\frac{5x}{x^2-5x}$

Domain:

Find the Domain of each Radical Function. Use interval notation.

1. $f(x) = 4\sqrt{x-8} + 3$

2. $f(x) = -\sqrt{x+2}$

3. $f(x) = 5 + 2\sqrt{x-6}$

4. $f(x) = 5\sqrt{-3x+9} - 1$

5. $f(x) = \sqrt{-2x+7}$

6. $f(x) = \sqrt{x^2-6}$