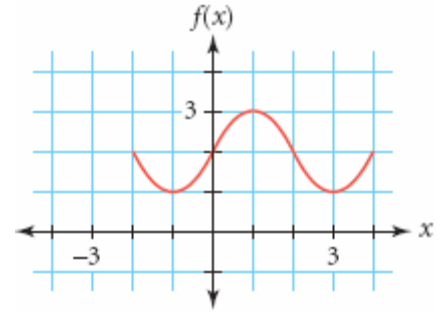


Chapter 7 Review #3

- 1) Answer each questions for the graph of  $f(x)$
- What is the domain of the function?
  - What is the range of the function?
  - What is  $f(3)$
  - For what values of  $x$  does  $f(x) = 1$ ?



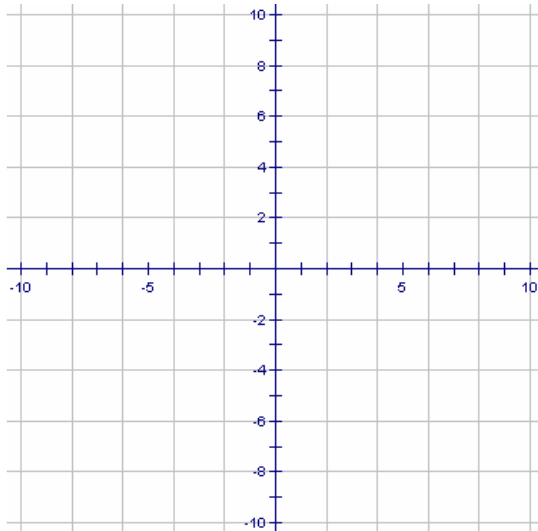
- 2) Which of these tables of  $x$ - and  $y$ - values represent function? Explain your answers.

$x$	$y$
0	5
1	7
3	10
7	9
5	7
4	5
2	8

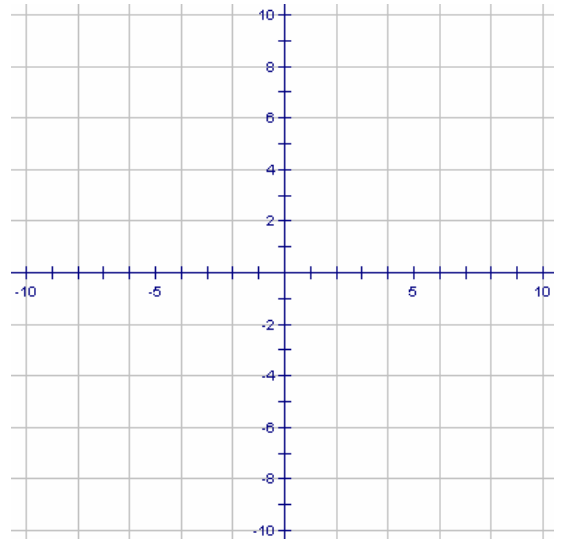
$x$	$y$
3	7
4	9
8	4
3	5
9	3
11	9
7	6

$x$	$y$
2	8
3	11
5	12
7	3
9	5
8	7
4	11

- 3) Draw graphs that fit these descriptions:
- A function that has a domain of  $-5 \leq x \leq 1$ , a range of  $-4 \leq y \leq 4$ , and  $f(-2) = 1$



- A relationship that is not a function and that has inputs on the interval  $-6 \leq x \leq 4$  and outputs on the interval  $0 \leq y \leq 5$ .



- 4) Consider the function  $f(x) = |x|$ .
- What is  $f(-3)$ ?
  - What is  $f(2)$ ?
  - For what  $x$ -value(s) does  $f(x) = 16$ ?

5) Consider the function  $f(x) = x^2$ .

a. What is  $f(-3)$ ?

b. What is  $f(2)$ ?

c. For what  $x$ -value(s) does  $f(x) = 16$ ?

6) Solve each of the following equations

a.  $|x| = 36$

b.  $x^2 = 36$

c.  $|x| + 11 = 36$

d.  $|x + 11| = 36$

e.  $(x + 11)^2 = 36$

f.  $x^2 + 11 = 36$

7) Evaluate both sides of each statement to determine whether to replace the box with  $<$ ,  $>$ , or  $=$ .

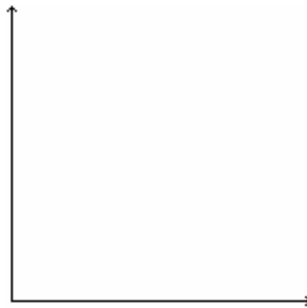
a.  $|3| + |4| \square |3 + 4|$

b.  $|-5| \cdot |8| \square |-40|$

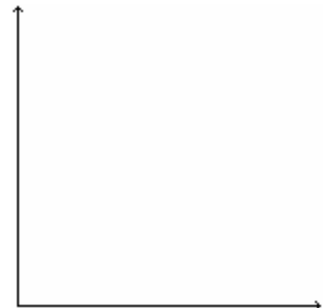
c.  $\frac{|36|}{-|-9|} \square \frac{|36|}{|-9|}$

8) Sketch a graph for each of the following descriptions

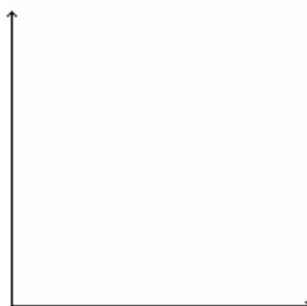
Decreasing with a slower and slower rate of change, then decreasing with a faster and faster rate of change



Decreasing with a slower and slower rate of change, then increasing with a faster and faster rate of change



Neither increasing nor decreasing



Discrete increasing linearly then decreasing non-linearly

