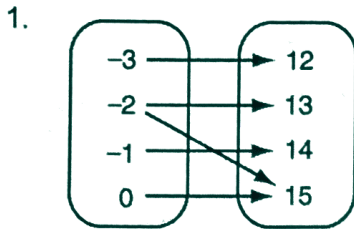


## Functions Basics Review Worksheet

Tell whether the relation is a function. Explain.

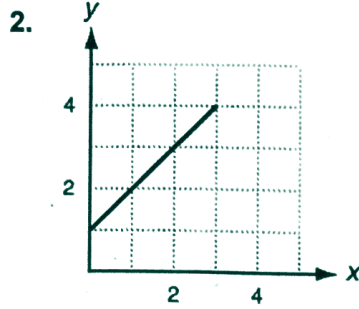


Function? \_\_\_\_\_

Explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Function? \_\_\_\_\_

Explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. 

x	y
8	8
6	6
4	4
2	6
0	8

Function? \_\_\_\_\_

Explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

For #4-9, use the following formulas

$$f(x) = 7 - 3x$$

$$h(x) = 2(x - 1)^2$$

$$g(x) = \frac{x-3}{-2} + 3$$

4.  $h(4)$

5.  $f(-5)$

6.  $h(-4)$

7.  $g(7)$

8.  $g(-1)$

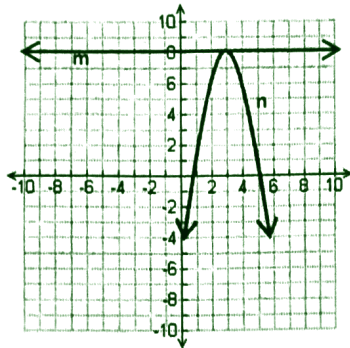
9.  $f(6)$

For 10 and 11, write a function for the situation. Identify the independent and dependent variables.

10. An ice rink charges \$3.50 for skates and \$1.25 per hour.

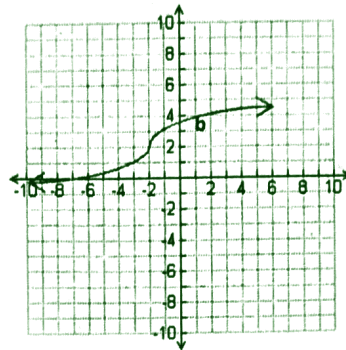
11. Terry has 30 pieces of gum and gives 2 pieces to each of his friends.

12.



Which is greater  
 $m(3)$  or  $n(3)$ ?

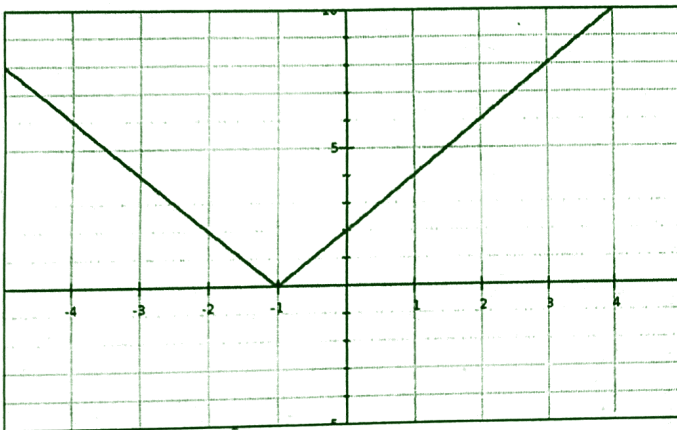
13.



Which is greater  
 $b(-2)$  or  $c(-2)$ ?

$$c(x) = -\frac{x}{2} - 4$$

Use the graph below to answer #14-16

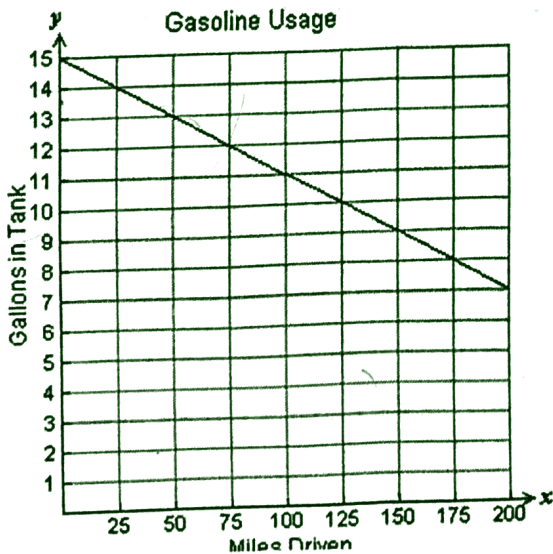


14. What does it mean if I ask: **Find  $f(3)$** ?

15. **Using the graph**, find  $f(3)$  and write the value below.

16. **Using the graph**, find  $x$  when  $f(x)=2$ .

17.



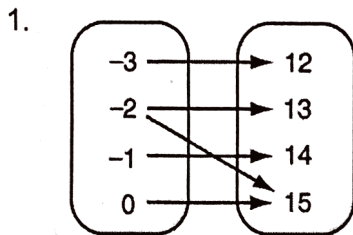
Find  $f(125)$

What does it mean in this situation?

# Functions Review Worksheet

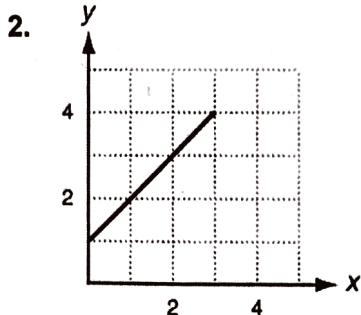
Key

Tell whether the relation is a function. Explain.



Function? No

Explain: -2 has two different outputs



Function? yes

Explain: each x has one y (passes the vertical line test)

3. 

x	y
8	8
6	6
4	4
2	6
0	8

Function? yes

Explain: each input has one output

For #4-9, use the following formulas

$$f(x) = 7 - 3x$$

$$h(x) = 2(x - 1)^2$$

$$g(x) = \frac{x-3}{-2} + 3$$

4.  $h(4)$

$$h(4) = 2(4-1)^2$$

$$h(4) = 2(3)^2$$

$$h(4) = 18$$

5.  $f(-5)$

$$f(-5) = 7 - 3(-5)$$

$$f(-5) = 7 + 15$$

$$f(-5) = 22$$

6.  $h(-4)$

$$h(-4) = 2(-4-1)^2$$

$$h(-4) = 2(-5)^2$$

$$h(-4) = 50$$

7.  $g(7)$

$$g(7) = \frac{7-3}{-2} + 3$$

$$g(7) = \frac{4}{-2} + 3$$

$$g(7) = -2 + 3$$

$$g(7) = 1$$

8.  $g(-1)$

$$g(-1) = \frac{-1-3}{-2} + 3$$

$$g(-1) = 2 + 3$$

$$g(-1) = 5$$

9.  $f(6)$

$$f(6) = 7 - 3(6)$$

$$f(6) = 7 - 18$$

$$f(6) = -11$$

For 10 and 11, write a function for the situation. Identify the independent and dependent variables.

10. An ice rink charges \$3.50 for skates and \$1.25 per hour.

$$f(x) = 3.50 + 1.25x$$

IND = # of ~~hours~~ hours  
 DEP = cost

11. Terry has 30 pieces of gum and gives 2 pieces to each of his friends.

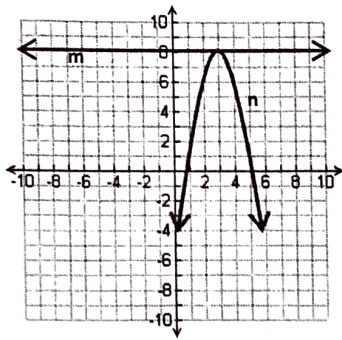
$$g(x) = 30 - 2x$$

IND = # of ~~pieces of gum~~ friends  
 DEP = # of pieces of gum left

$$g(x) = 2x$$

IND = # of ~~pieces of gum~~ friends  
 DEP = # of pieces of gum given out

12.



Which is greater

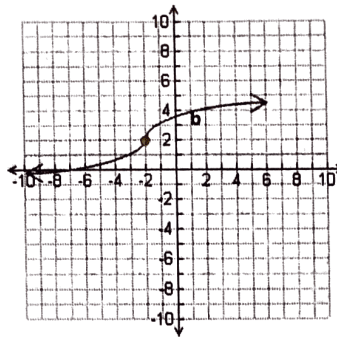
$m(3)$  or  $n(3)$ ?

$m(3) = 8$

$n(3) = 8$

NEITHER!  
THEY ARE  
EQUAL.

13.



Which is greater

$b(-2)$  or  $c(-2)$ ?

$b(-2) = 2$

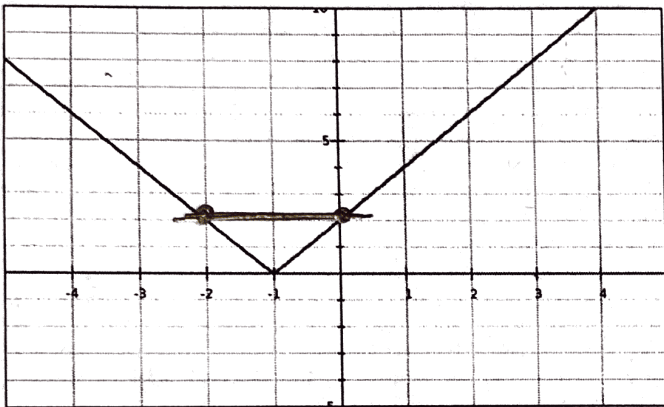
$c(x) = -\frac{x}{2} - 4$

$c(-2) = -\frac{(-2)}{2} - 4$

$c(-2) = -3$

$b(-2) > c(-2)$   
 $2 > -3$

Use the graph below to answer #14-16



14. What does it mean if I ask: **Find  $f(3)$** ?

find the output if the  
input is three

15. **Using the graph**, find  $f(3)$  and write the value below.

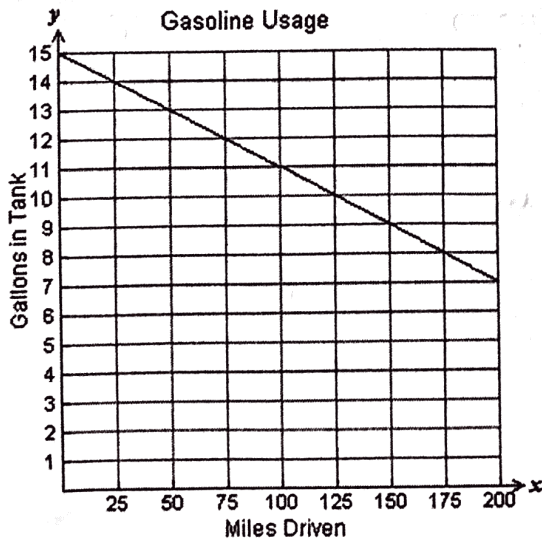
$f(3) = 8$

16. **Using the graph**, find  $x$  when  $f(x) = 2$ .

$f(0) = 2$  and  $f(-2) = 2$

$0 + -2$

17.



Find  $f(125) = 10$

What does it mean in this situation?

There are 10 gallons left  
in the tank after  
driving 125 miles.