

Algebra 1 Chapter 5 Practice Test

Multiple Choice

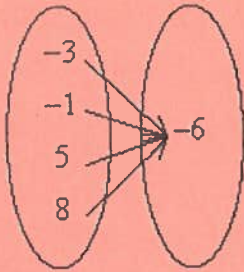
Identify the choice that best completes the statement or answers the question.

A

1. Identify the mapping diagram that represents the relation and determine whether the relation is a function.

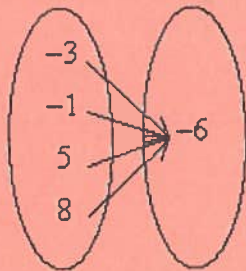
$$\{(-3, -6), (-1, -6), (5, -6), (8, -6)\}$$

a.



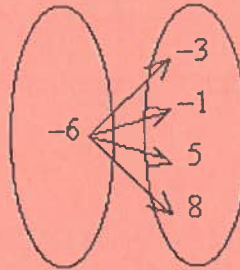
The relation is not a function.

b.



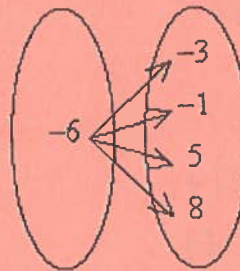
The relation is a function.

c.



The relation is a function.

d.



The relation is not a function.

B

2. A taxi company uses the rule $c = 0.30m + 1.50$ to determine a total cost c based on the number of miles m .

a. What is the cost for a 1-mile ride?

$$0.30(1) + 1.50 = 1.80$$

b. What is the cost for a 2.7-mile ride?

a. \$0.30; \$0.81

b. \$1.80; \$2.31

c. \$1.50; \$1.80

d. \$0.30; \$4.35

C

3. Crystal earns \$5.00 per hour mowing lawns.

a. Write a rule to describe how the amount of money m earned is a function of the number of hours h spent mowing lawns.

a. $m(h) = h + 15$

c. $m(h) = 5.00h$

b. $m(h) = \frac{h}{5.00}$

d. $m(h) = 5.00h + 15$

A

4. The total cost to rent a row boat is \$20 times the number of hours the boat is used. Write an equation to model this situation if c = total cost and h = number of hours.

- a. $c = 20h$ b. $c = \frac{h}{20}$ c. $c - 20 = h$ d. $h = 20c$

C

5. What equation models the data in the table if d = number of days and c = cost?

Days	Cost
2	6
3	9
5	15
6	18

- a. $c = d + 3d$ b. $d = 3c$ c. $c = 3d$ d. $c = d + 3$

Short Answer - SHOW ALL WORK FOR FULL CREDIT

6. Find the range of $f(x) = 3x - 4$ for the domain $\{-1, 1, 3, 6\}$.

$\{-7, -1, 5, 14\}$

$3(-1) - 4$
 $-3 - 4$
 -7

$3(1) - 4$
 $3 - 4$
 -1

7. Evaluate $f(x) = 2x + .1$ for $x = -1$.

$f(-1) = 2(-1) + 1$
 $-2 + 1$
 -1

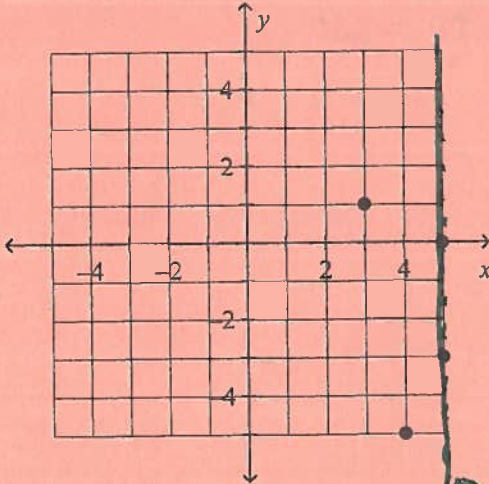
$f(-1) = -1$

8. Evaluate $f(x) = -2x^2 + 3$ for $x = -2$.

$-2(-2)^2 + 3 \rightarrow -2(4) + 3 \rightarrow -8 + 3$

$f(-2) = -5$

9. Use the vertical line test to determine whether the relation is a function.

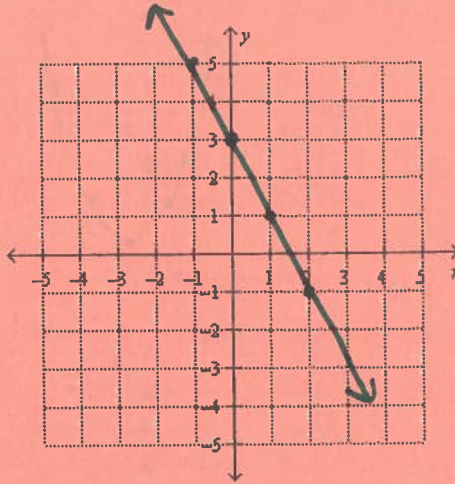


Not
a
function

vertical
line
test
fails

10. Complete the table. Use the domain $\{-2, -1, 0, 1, 2\}$. Then graph and label the function on the grid below.
 $y = -2x + 3$

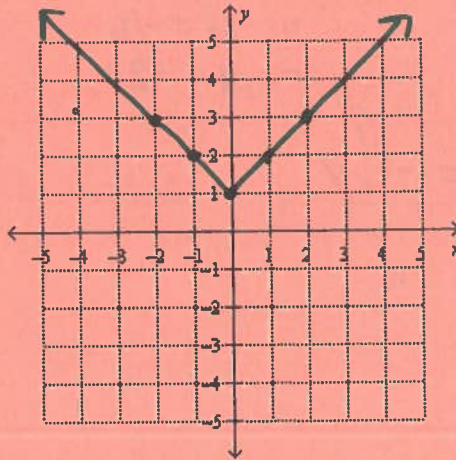
x	y
-2	7
-1	5
0	3
1	1
2	-1



$$\begin{aligned} & -2(-2) + 3 \\ & 4 + 3 \\ & 7 \end{aligned}$$

11. Complete the table. Use the domain $\{-2, -1, 0, 1, 2\}$. Then graph and label the function on the grid below.
 $y = |x| + 1$

x	y
-2	3
-1	2
0	1
1	2
2	3

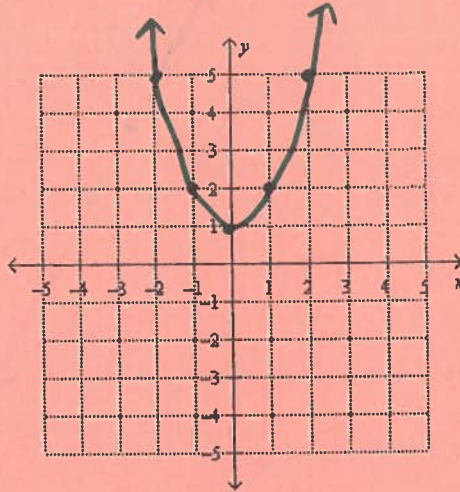


$$\begin{aligned} & |-2| + 1 \\ & 2 + 1 \\ & 3 \end{aligned}$$

$$\begin{aligned} & |-1| + 1 \\ & 1 + 1 \\ & 2 \end{aligned}$$

12. Complete the table. Use the domain $\{-2, -1, 0, 1, 2\}$. Then graph and label the function on the grid below.
 $y = x^2 + 1$

x	y
-2	5
-1	2
0	1
1	2
2	5



$$\begin{aligned} &(-2)^2 + 1 \\ &4 + 1 \\ &5 \\ &(2)^2 + 1 \\ &4 + 1 \\ &5 \end{aligned}$$

13. Write a function rule for the table.

x	f(x)
3	-12
4	-16
5	-20
6	-24

$$\begin{aligned} 3 \cdot -4 &= -12 \\ 4 \cdot -4 &= -16 \\ 5 \cdot -4 &= -20 \end{aligned}$$

$$f(x) = -4x$$

14. Write a function rule for the table.

x	f(x)
1	-2
2	-1
3	0
4	1

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

15. Write a function rule that gives the total cost $c(p)$ of p pounds of candy if each pound costs \$.39.

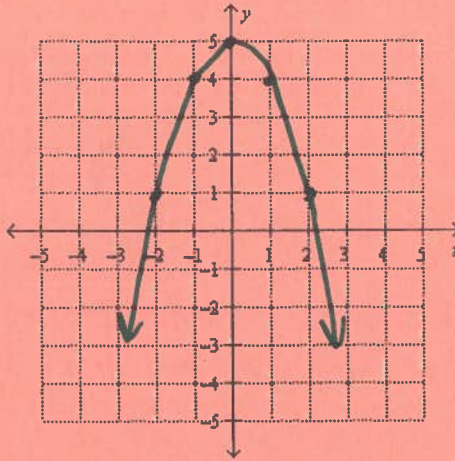
$$c(p) = 0.39 \cdot p$$

Name: _____

ID: A

16. Complete the table. Use the domain $\{-2, -1, 0, 1, 2\}$. Then graph and label the function on the grid below.
 $y = -x^2 + 5$

x	y
-2	1
-1	4
0	5
1	4
2	1



$$-(-2)^2 + 5$$
$$-(4) + 5$$
$$1$$

$$-(-1)^2 + 5$$
$$-(1) + 5$$
$$4$$

Essay

17. Make up a story of a complete trip and draw a descriptive graph of it. Make sure it includes several stops and shows a person traveling at different speeds. Describe the different areas of the graph in detail. Creativity is encouraged!

11
∩

Have

Fun.

Take a look at a
neighbors story

