



OGT (Ch. 2) Name: _____

Practice

1 If a relation has the rule $y = 2x$ and a domain of $\{2, 4, 6, 8\}$, identify the range.

- A. $\{1, 2, 3, 4\}$
- B. $\{2, 4, 6, 8\}$
- C. $\{4, 8, 12, 16\}$
- D. $\{(2, 4), (4, 8), (6, 12), (8, 16)\}$

2 Choose the rule for a relation that describes this table of values:

x	y
1	1
1	-1
2	2
2	-2

- A. The first value is the absolute value of the second value.
- B. The second value is the absolute value of the first value.
- C. The first value is the opposite of the second value.
- D. The second value is the opposite of the first value.

3 Choose the rule for a function that describes this table of values:

x	y
0	2
1	6
2	10
3	14

- A. $y = x + 2$
- B. $y = 4x + 2$
- C. $y = 4x - 2$
- D. $y = 6x - 2$

4 Which of the following represents a nonlinear function?

- A. $f(x) = 5x^2$
- B. $f(x) = 5x$
- C. $f(x) = 5x + 2$
- D. $f(x) = x + 5$

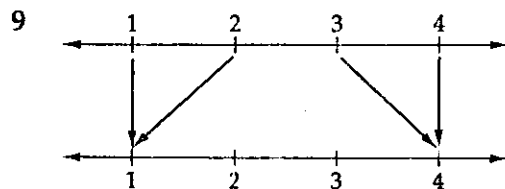
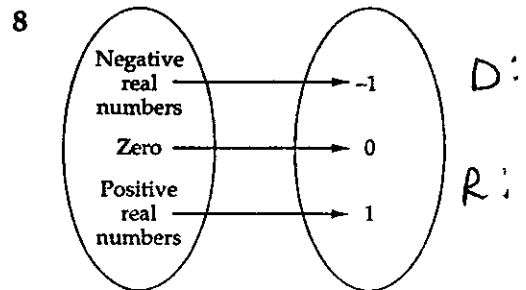
5 Which of the following relations represents a function?

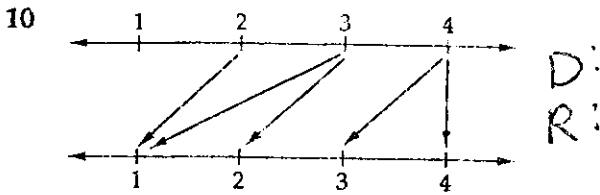
- A. $\{(1, 1), (1, 2), (1, 3)\}$
- B. $\{(2, 1), (1, 2), (2, 3)\}$
- C. $\{(1, 1), (2, 1), (3, 1)\}$
- D. $\{(1, 1), (2, 1), (2, 2)\}$

Exercises 6–10: State the domain and range for each relation and tell whether the relation is a function.

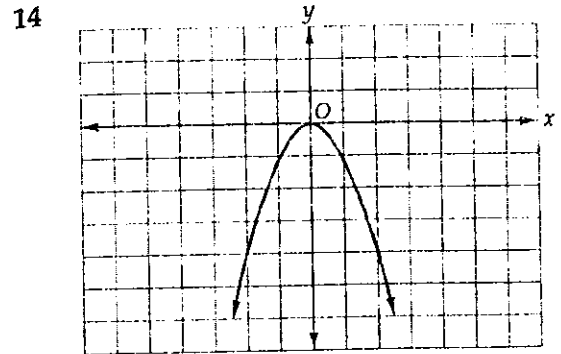
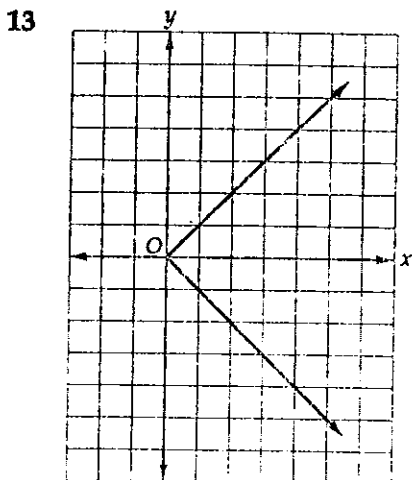
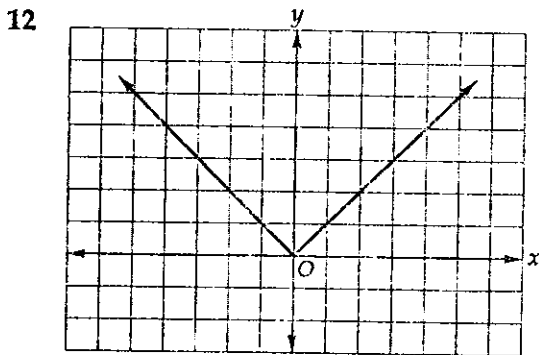
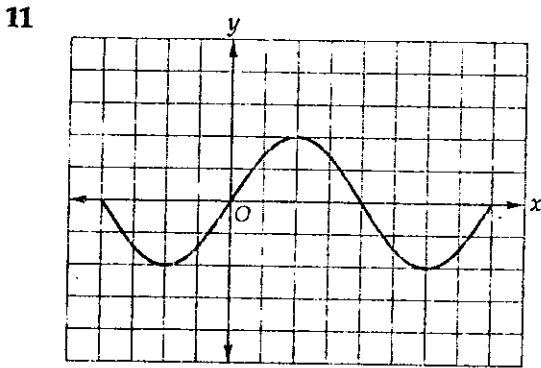
6 $\{(1,1), (2,4), (3,9)\}$ D: _____ R: _____

7 $\{(5,1), (6,2), (7,1)\}$ D: _____ R: _____





Exercises 11-14: Use the vertical line test to determine whether or not the graph represents a function.



15 If $f(x)$ is defined as $f(x) = x^2 - 5x + 6$, evaluate

- a $f(3)$ _____
 b $f\left(\frac{1}{2}\right)$ _____
 c $f(-1)$ _____

16 Graph the points $\{(1, 2), (3, 5), (8, 7)\}$. Do these points indicate a linear function? Explain your answer.

17 The cost, in cents, to mail x envelopes at standard postage is $c(x) = 37x$. How much will it cost to mail 25 holiday cards? How many cards can you mail if you have only \$10 to spend on postage?

18 Aaron rented a car for the weekend. He was charged a flat fee of \$89 plus \$0.30 per mile he traveled. Write the cost function, C , for how much he would have to pay if he traveled n miles.
