

State the domain and range of each relation.

1.  $\{(2,12), (0,12), (-1,5), (17,0)\}$

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

2.  $\{(3,6), (3,-7), (2,0), (2,18)\}$

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

3.  $\{(1,4), (8,7), (-7,3), (0,3)\}$

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

4.  $\{(-8,0), (-8,5), (-8, \frac{1}{2}), (-8,9)\}$

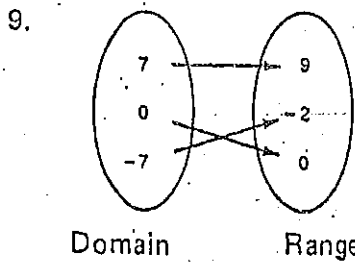
Domain: \_\_\_\_\_

Range: \_\_\_\_\_

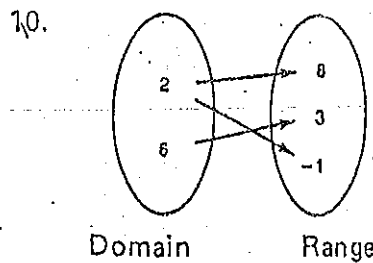
Give the range of each relation for the given domain.

Relation	Domain	Range
5. $y = 3x - 7$	$\{-3, 0, 2, 4\}$	_____
6. $y = 9 - 4x$	$\{-3, 0, 2, 4\}$	_____
7. $y = x^2 + 2$	$\{-2, 0, 3, 5\}$	_____
8. $y = 2x + 5$	$\{-2, 0, 3, 5\}$	_____

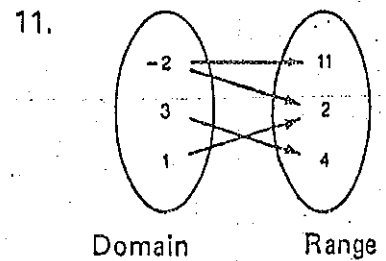
Write YES or NO to tell whether each mapping or graph represents a function.



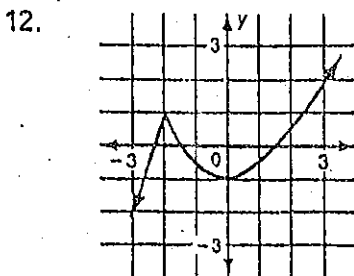
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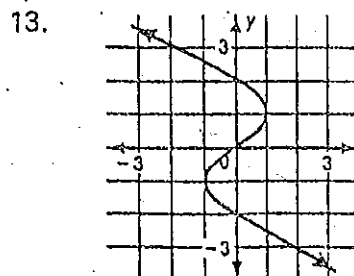
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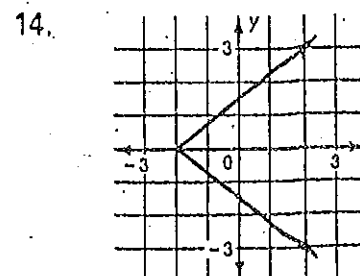
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For  $f(x) = 2 + 6x$ , find each of the following.

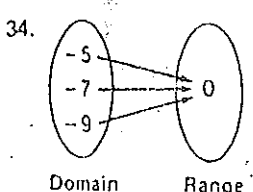
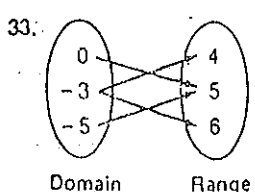
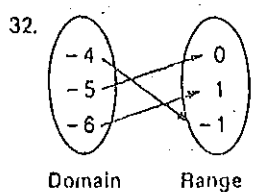
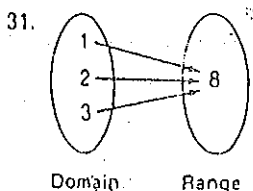
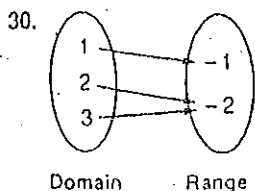
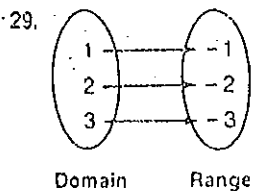
Examples: a.  $f(7)$                       b.  $f(5a)$

Solutions: a.  $f(7) = 2 + 6(7)$       b.  $f(5a) = 2 + 6(5a)$   
 $f(7) = 44$                                $f(5a) = 2 + 30a$

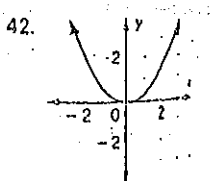
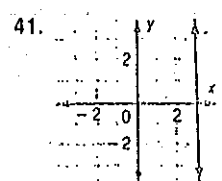
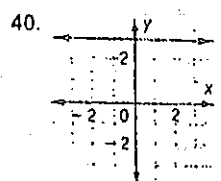
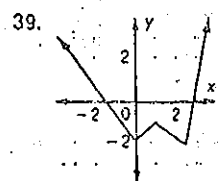
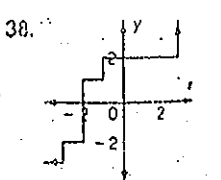
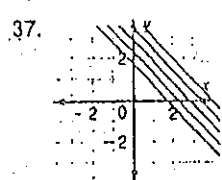
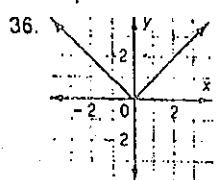
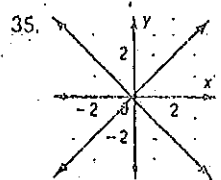
1.  $f(-4)$  \_\_\_\_\_                      2.  $f(1.5)$  \_\_\_\_\_                      3.  $f(b + 3)$  \_\_\_\_\_

4.  $f(0)$  \_\_\_\_\_                      5.  $f(a^2)$  \_\_\_\_\_                      6.  $f(-2c)$  \_\_\_\_\_

Tell whether each mapping is a function. Give a reason for each answer.



Use the Vertical Line Test to determine whether each graph is a function.



Is the relation a function?

43.  $\{(1, 3), (2, 3), (-1, 4), (-6, 4)\}$   
 45.  $\{(-4, 4), (-1, 1), (0, 0), (1, -1)\}$

44.  $\{(-4, -4), (-1, -1), (0, 0), (1, 1)\}$   
 46.  $\{(-1, -4), (-1, 0), (-1, 2), (-1, 4)\}$