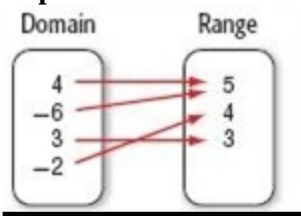
1-7 Functions

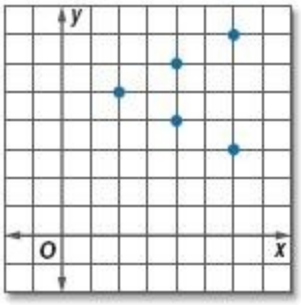
Determine whether each relation is a function. Explain.

20.

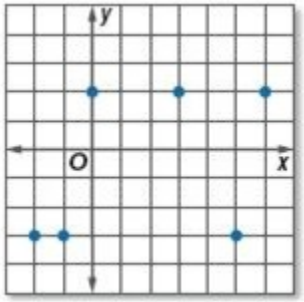


21.

24.



25.



Determine whether each relation is a function.

29. $y = -8$

30. $x = 15$

If $f(x) = -2x - 3$ and $g(x) = x^2 + 5x$, find each value.

36. $g(-3)$

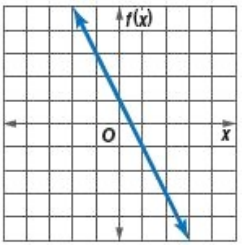
38. $f(0) - 7$

40. $g(-6m)$

42. $f(r + 2)$

44. $3[g(n)]$

54. **ERROR ANALYSIS** Corazon thinks $f(x)$ and $g(x)$ are representations of the same function. Maggie disagrees. Who is correct? Explain your reasoning.



x	$g(x)$
−1	1
0	−1
1	−3
2	−5
3	−7

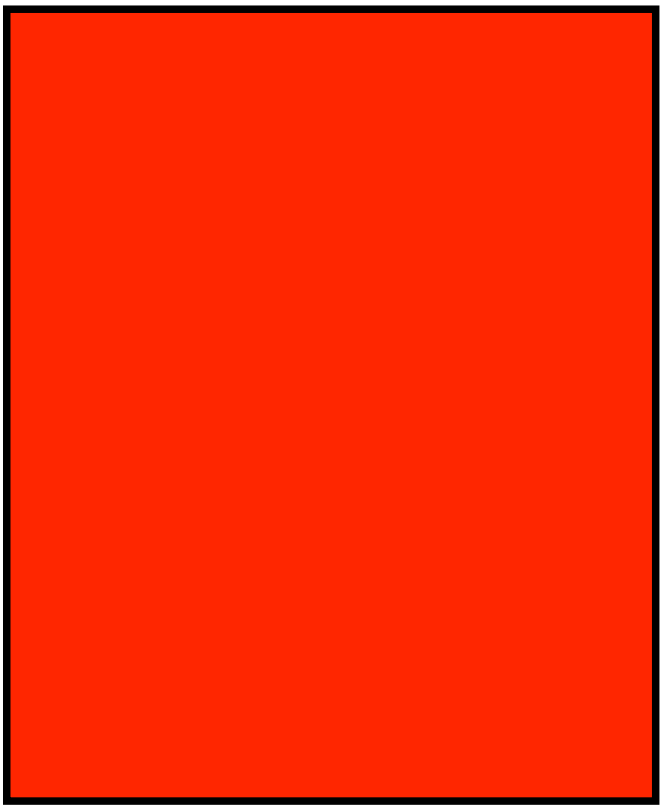
The equation for $f(x)$ is: $f(x) = -2x + 1$.

For the table, we can see that as x increases by 1, $g(x)$ decreases by 2, which means the slope of $g(x)$ is –2. But the y-intercept for $g(x)$ is (0, –1), giving g(x) = $-2x - 1$.

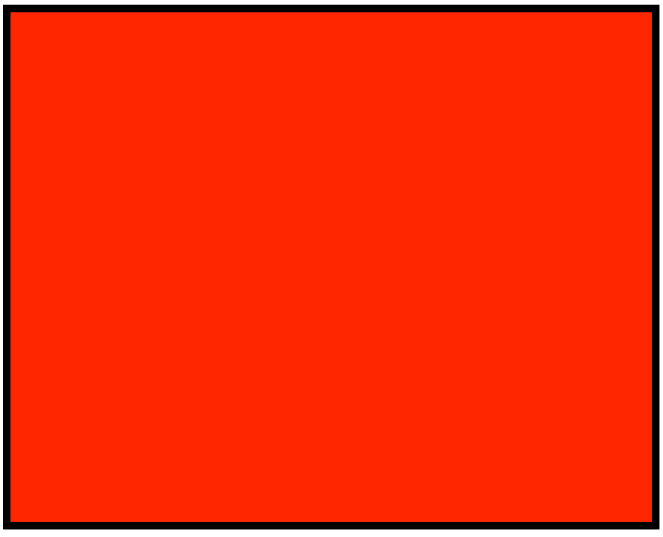
The graph and table are representative of different functions.

58. For the function $y = 15x - 4$, assume the domain is only values of x from 0 to 5. What is the range of the function?

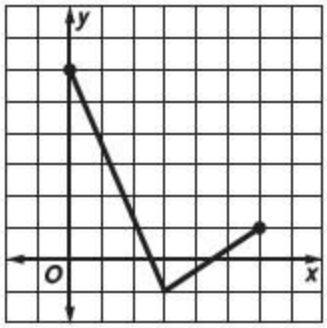
F All values from 15 to 20.
G All values from $\frac{4}{15}$ to $\frac{3}{15}$.
H All values from –4 to 71.
J Two values from –4 to 71.



59. Which statement best describes how to determine when a graph represents a function?



60. Which of the following best describes the relation shown in the graph?



F Domain: $0 \le x \le 6$; Range: $-1 \le y \le 6$; the relation is a function
G Domain: $0 \le x \le 6$; Range: $-1 \le y \le 6$; the relation is a not function
H Domain: $-1 \le x \le 6$; Range: $0 \le y \le 6$; the relation is a function
J Domain: $-1 \le x \le 6$; Range: $0 \le y \le 6$; the relation is a function