

40

Functions

SOL 5.20

Example

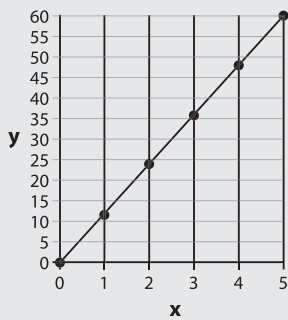
What is the missing number of this function table?

x	y
5	12
8	15
12	?
16	23

- A 18 C 20
 B 19 D 21

Example

What is the rule for this function table?



- A $y = x + 12$
 B $y = x \div 12$
 C $y = 12x$
 D $y = x - 12$

Thinking It Through

Solve —*Look for a Pattern* Since the values of y are greater than the values of x , check to see if it is an addition function by subtracting $y - x$:

$$12 - 5 = 7, 15 - 8 = 7, 23 - 16 = 7$$

Each value of y is 7 greater than each value of x . To find y when $x = 12$, add $12 + 7 = 19$, answer B.

Thinking It Through

Solve —*Translate It* To find the rule of this function, make a function table from the values in the graph:

x	y
1	12
2	24
3	36
4	48
5	60

Each value of y is 12 times greater than each value of x :
 $y = 12x$, choice C.

Review

- A **function** is a relationship in which one quantity depends on another quantity. Functions can be shown in equations, tables, or graphs.
- The rule of the function must work for every value in a set.

Functions

DIRECTIONS Read and solve each question. Then circle the letter of the best answer.

1 What is the rule for this function table?

x	y
6	3
10	7
15	12
18	15

- A $y = 2x$
- B $y = x \div 2$
- C $y = x - 3$
- D $y = 3x$

2 What is the missing number in this function table?

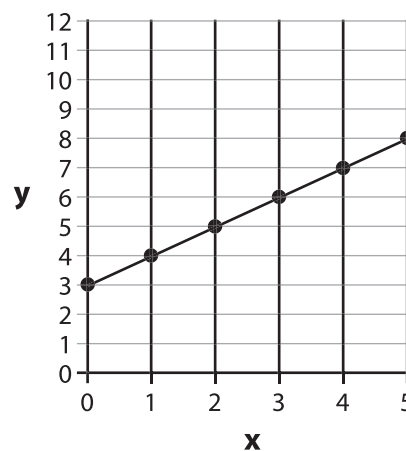
x	y
4	16
8	32
11	?
15	60

- F 40
- G 44
- H 48
- J 52



The rule for a function must work for every set of values.

3 If $x = 8$, what is the value of y ?



- A 9
- B 10
- C 11
- D 12

4 What is the rule for this function table?

x	y
3	10.5
5	17.5
8	28
12	42

- F $y = 3.5x$
- G $y = x + 7$
- H $y = x + 30$
- J $y = 2.5x$