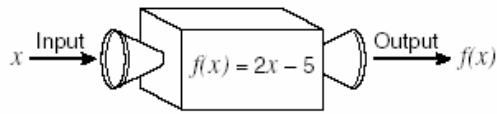


Name \_\_\_\_\_

Date \_\_\_\_\_

Block \_\_\_\_\_

1.



Using the function machine from the diagram, what is  $f(10)$ ?

- F 5
- G 7.5
- H 15
- J 25

2.

Which is a zero of the function  $f(x) = x^2 + 3x - 4$ ?

- A -4
- B -1
- C 3
- D 4

3.

What is the range of the function  $f(x) = \frac{1}{2}x + 5$  when the domain is  $\{2, 4, 6\}$ ?

- F  $\{-6, -2, 2\}$
- G  $\{6, 7, 8\}$
- H  $\{2, 4, 6\}$
- J  $\{1, 3, 5\}$

4.

Which is a zero of the function  $f(x) = 3x - 21$ ?

- A -21
- B -7
- C 0
- D 7

**A.15**

5.

A lumber yard sells square scraps of plywood with sides varying from 1 foot to 4 feet. Ed wants to use some of these pieces to build storage cubes. The relationship between the length of the side of a cube and the volume of the cube is expressed by the function

$$f(x) = x^3$$

where  $x$  is the length of a side of the cube. What is the range of this function in cubic feet for the domain given?

- F Range varies from 1 to 64
- G Range varies from 1 to 16
- H  $\{1, 64\}$
- J  $\{1, 16\}$

6.

Which is a zero of the function

$$f(x) = x^2 + 6x - 7?$$

- F -7
- G -6
- H 7
- J 41

7.

What is the range of the function  $f(x) = 3x - 1$  when the domain is  $\{-1, 0, 1\}$ ?

- F  $\{-1, 2\}$
- G  $\{-1, 0, 1\}$
- H  $\{1, 2, 4\}$
- J  $\{-4, -1, 2\}$

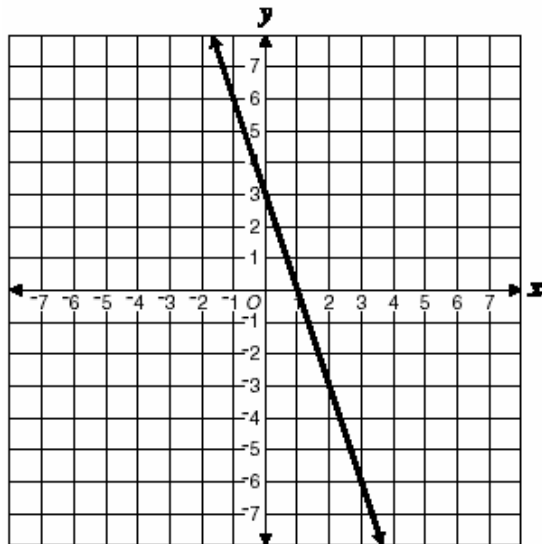
8.

If  $f(r) = -2r + 3$ , what is  $f(-4)$ ?

- F -5
- G -1
- H 5.5
- J 11

9.

The graph of the function  $f(x) = -3x + 3$  is shown.



What is the value of  $f(3)$ ?

- F 3
- G 0
- H -2
- J -6

10.

If  $f(x) = -2x^2 + x - 5$ , what is  $f(3)$ ?

- F -20
- G -14
- H 16
- J 34

11.

Which is a zero of the function

$$f(x) = x^2 - 8x + 7?$$

- A 8
- B 7
- C -1
- D -7

12.

What is the range of the function

$$f(x) = (x - 1)^2$$

when the domain is  $\{-5, 0, 5\}$ ?

- A  $\{1, 16, 36\}$
- B  $\{1, 24\}$
- C  $\{1, 26\}$
- D  $\{-12, -2, 8\}$