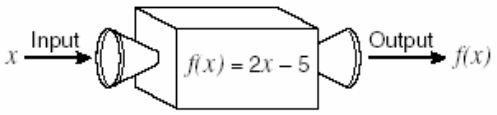
Name _____ Date _____ Block _____

***A.15***

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

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** $\{-4, -1, 2\}$

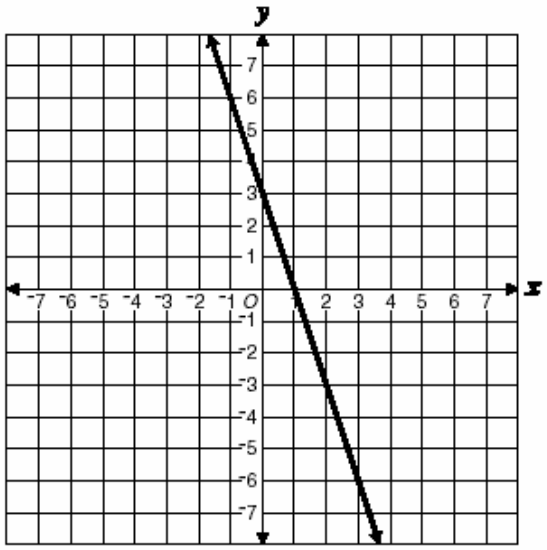
8.

**If $f(x) = -2x + 3$, 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** $\{-12, -2, 8\}$