## **Algebra Concepts: Summer Post-Assessment**

**Questions 1-3:** Add and subtract the integers.

1.

$$(-8) + 3$$

Answer: \_\_\_\_\_

2.

Answer: \_\_\_\_\_

3.

Answer: \_\_\_\_\_



(continued)

### Questions 4-6: Multiply and divide the integers.

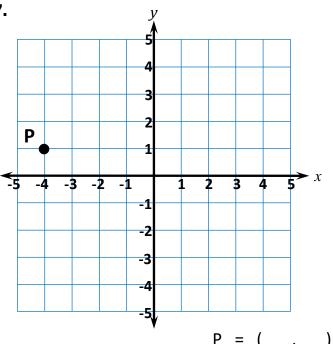
4.		
	9 x -4	
		Answer:
5.		
	-6(-5)	
		Answer:
6.		
	48 ÷ -6	
		Answer:

STOP

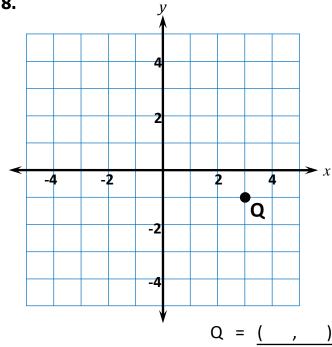
(continued)

Questions 7-9: Write the ordered pair for the point.

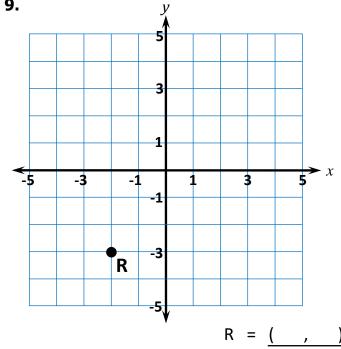
7.



8.



9.



#### **Questions 10-12:** Find the equivalent expression.

**10**.

The product of *x* and 3, increased by 4

- 0.4x + 3 0.3(x + 4) 0.3x + 4 0.x + 3 + 4

11.

5 less than 8 times x

- $\circ$  8x 5  $\circ$  5x 8  $\circ$  8 5x  $\circ$  8(x 5)

12.

7 times the difference of x and 3

- $\circ$  3x 7  $\circ$  3(x 7)  $\circ$  7x 3  $\circ$  7(x 3)



(continued)

**Questions 13-15:** Evaluate the expression for the given value of x.

**13.** Evaluate 
$$3x + 6$$
 for  $x = 4$ .

Answer: \_\_\_\_\_

**14.** Evaluate 
$$x^2 + 4$$
 for  $x = 5$ .

Answer: \_\_\_\_\_

**15.** Evaluate 15 - 4x for x = 2.

Answer: \_\_\_\_\_



Questions 16-18: Find the equivalent expression.

**16.** 

$$x + x$$

 $\circ$  2x

 $\bigcirc 2x^2 \qquad \bigcirc x+2 \qquad \bigcirc x^2$ 

**17.** 

$$2x + 8 + 4x$$

 $\circ$  14x

 $\circ$  2x + 12  $\circ$  6x + 8  $\circ$  14x<sup>2</sup>

18.

$$4(x + 6)$$

 $\circ x^4 + 10 \circ 4x + 24 \circ 4x + 6 \circ x + 24$ 



(continued)

#### Questions 19-21: Solve the equation.

19.

$$x + 3 = 12$$

x = \_\_\_\_\_

20.

$$35 = 5x$$

*x* = \_\_\_\_\_

21.

$$\frac{1}{2}x = 6$$

*x* = \_\_\_\_\_



#### **Questions 22-24:** Find the equivalent expression.

22.

$$(x + 4) + (2x + 3)$$

$$\circ$$
 3x + 7

$$\circ$$
 3x + 12

$$\circ$$
 3x + 7  $\circ$  3x + 12  $\circ$  2x + 12  $\circ$  2x + 7

$$2x + 7$$

23.

$$(9x + 6) - (2x + 1)$$

$$\circ$$
 11x + 5

$$\circ$$
 7x + 7

$$\circ$$
 11x + 5  $\circ$  7x + 7  $\circ$  11x + 7  $\circ$  7x + 5

$$\circ$$
 7x + 5

24.

$$(5x + 4) - (2x - 3)$$

$$\circ$$
 7x - 7

$$\circ$$
 7x - 7  $\circ$  10x - 12  $\circ$  3x + 1  $\circ$  3x + 7

$$\circ$$
 3x + 1

$$\circ$$
 3x + 7



#### **Questions 25-27:** Find the equivalent expression.

25.

$$7(x + 3)$$

$$\circ$$
 7x + 3

$$\circ$$
 7x + 21

$$\circ$$
 21 $x$ 

$$\circ$$
 7x + 3  $\circ$  7x + 21  $\circ$  21x  $\circ$  x + 21

26.

$$4(6x + 2)$$

$$\circ$$
 6x + 8

$$\circ$$
 6x + 8  $\circ$  24x + 2  $\circ$  32x

$$\circ$$
 32 $x$ 

$$\circ$$
 24*x* + 8

**27.** 

$$5(2x+4)+x$$

$$010x + 20$$

$$\bigcirc 10x + 20 \bigcirc 11x + 20 \bigcirc 31x$$

$$\circ$$
 11x + 4



**Questions 28-30:** Find the equivalent expression.

28.

$$4x + 20$$

$$0.4(x+20) 0.4(x+5) 0.24x 0.4x+5$$

$$\circ$$
 4(x + 5)

$$\circ$$
 24 $x$ 

$$\circ$$
 4x + 5

29.

$$24x - 3$$

$$\circ$$
 -3(8x + 1)  $\circ$  3(8x - 1)  $\circ$  21x

$$\circ$$
 3(8x - 1)

$$\circ$$
 21 $x$ 

$$\circ$$
 3(21x - 1)

30.

$$15x + 35$$

$$\circ$$
 15(x + 20)

$$\circ$$
 5(3x + 7)

$$\circ$$
 50x

$$\circ$$
 15(x + 20)  $\circ$  5(3x + 7)  $\circ$  50x  $\circ$  5(10x + 30)



#### Questions 31-33: Solve the equation.

#### 31.

$$12 = 3x - 6$$

#### 32.

$$4(x+3) = 20$$

### 33.

$$\frac{1}{2}x + 3 = 9$$

*x* = \_\_\_\_\_

