

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Aim: How can we practice simplifying algebraic expressions?**

Simplify each expression by combining like-terms and by using the distributive property.

1.  $8x + 2x$

2.  $-4p + 9p$

3.  $1.2y + (-3.6y)$

4.  $5x + 17 - 8x - 36$

5.  $\frac{2}{3}x + 3.6 - \frac{1}{2}x - 4.7$

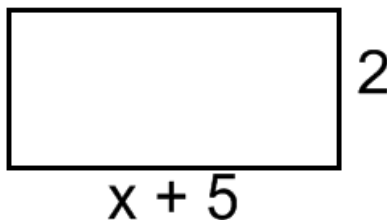
6.  $5(x - 8)$

7.  $-8(-5m + 7) + 1$

8.  $10 - (2x + 1)$

*Geometry Applications*

9. Express the perimeter and area as a simplified algebraic expression.



10. a.) What is the result when 15 is subtracted from 20?

b.) What is the result when  $5x$  is subtracted from  $7x$ ?

c.) What is the result when  $5x$  is subtracted from  $-3x$ ?

d.) What is the result when  $y + 5$  is subtracted from  $3y - 2$ ?

11. When  $\frac{5}{8}x + 1\frac{1}{3}$  is subtracted from  $1\frac{1}{4}x - 5\frac{1}{6}$ , the result is:

A  $\frac{5}{8}x - 3\frac{5}{6}$

B  $\frac{5}{8}x - 6\frac{1}{2}$

C  $-\frac{5}{8}x + 3\frac{5}{6}$

D  $-\frac{5}{8}x + 6\frac{1}{2}$

12. Which expression below is equivalent to  $\frac{4}{3}x + 4\frac{2}{3}$ ?

A  $\frac{4}{3}(x + 2)$

B  $\frac{1}{3}(4x + 6)$

C  $\frac{2}{3}(2x + 4)$

D  $\frac{2}{3}(2x + 7)$

13.  $-4p - (1 - 6p)$

14.  $-7(k - 8) + 2k$

15.  $3 - 8(7 - 5n)$

16.  $b - 3 + 6 - 2b$

17.  $2(x + 5) - 3(x - 2)$

18.  $x - (2x + 7)$

19.  $-4(3m + 2) + 1$

20.  $8 - (2x - 1)$



When is an expression fully simplified?

What property simplifies the following  $2(y - 7)$ ?