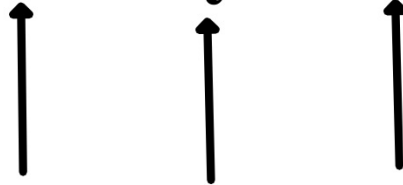


Lesson 3.1

Learning Target: Simplify Algebraic Expressions

Algebraic Expression

$$3x + 5y + 22$$



Terms are "Parts" of the expression

3x

5y

22

Three Terms

More Vocabulary

$$10x + 7$$

Coefficient:
a number that
multiplies a
variable

Variable

Constant:
a number
(not with a variable)

$$-\frac{3}{4}$$
$$2.86$$

Like Terms

$$14 + 2y + 8x - 6 + 4x - 9x$$

Like Terms Are 8x
and 4x and -9x

Like Terms Are
14 and -6

2y is the only variable
term with a y (it is alone)



Simplifying Algebraic Expressions (Combining Like Terms)

$$14y + 12 + 8x - 3 + 2y - 6x$$

$$\textcircled{14y} \quad \nabla + 12 \quad \boxed{+ 8x} \quad \nabla - 3 \quad \textcircled{+ 2y} \quad \boxed{- 6x}$$

$$14y + 2y + 12 - 3 + 8x - 6x$$

$$16y + 9 + 2x$$

~~★~~ $2x + 16y + 9$

Identify and Combine Like Terms

Simplify: $\frac{3}{4}y + 12 - \frac{1}{2}y - 6$

$$\frac{3}{4}y - \frac{2}{4}y = \frac{1}{4}y$$

$$\frac{1}{4}y + 6$$

Use the Distributive Property!

Simplify

$$4 \cdot (3n - 7)$$

$$12n - 28$$

$$-3 \cdot (6w - 2)$$

$$-18w + 6$$

Use the Distributive Property!

Simplify:

$$-\frac{1}{2}(6n + 4) + 2n$$

$$-3n - 2 + 2n$$

$$-1n - 2 = -1n + (-2)$$

$$2x + y$$

$$(-n - 2)$$

Let's Practice some together

You Have 3 Minutes to Get Supplies, Sit Down and Be Ready

- **Find a Partner**
- **Get a Whiteboard**
- **Get a tissue**
- **Get 3 Colors of Markers**

Identify the terms and like terms in the expression.

1. $y + 10 - \frac{3}{2}y$

2.

$1y - \frac{3}{2}y + 10$
 $\frac{1}{2}y - \frac{3}{2}y$

$-\frac{1}{2}y + 10$

Simplify the expression.

4. $14 - 3z + 8 + z$

$2z + 22$

$2z + 22$

Simplify the expression.

7. $3(q + 1) - 4$

$$3q + 3 - 4$$

$$3q + (-1)$$

$$3q - 1$$



Each person in a group buys a ticket, a medium drink, and a large popcorn. Write an expression in simplest form that represents the amount of money the group spends at the movies. Interpret the expression.

Words

Ex

$$P(7.5 + 2.75 + 4)$$

- ❖ The expression $14.25x$ indicates that the total cost per person is \$14.25.

$$14.25p$$

Homework

page 84 & 85

4, 6, 8, 12-26