

SIMPLIFYING EXPRESSIONS

Mrs. Thornberry wrote three examples of expressions on the board as shown. Using the examples, write your prediction of what makes something a mathematical expression in the space below her examples.

$$-25$$

$$30a + 8$$

$$-4.2x + 9y - 13x$$

EXPRESSION

- A mathematical phrase that can contain _____, _____ and _____ (like addition and subtraction).
- Will not have an _____ sign.

TERM

- A term is a constant or a _____ in an expression.
- Separated by _____ and _____ signs.

COEFFICIENT

- The number in front of a _____.

LIKE TERMS

- Must have both the same base (or _____) and the same exponent (or _____).

Use the definitions above to help you complete the following.

1. Give an example of an expression with four terms.

2. List all the terms in the expression below.

$$6x - 10y + 13 + 5z$$

3. List the coefficients in the expression below.

$$14x - 7x + 1 - 2x$$

4. Give an example of a like term for each of the following:

a. $14y$ _____

b. $-9b$ _____

c. 200 _____

d. h^2 _____

5. Circle the letter of any card that gives an example of like terms.

A.

$$\frac{1}{4}c \text{ and } -9c$$

B.

$$2.2n \text{ and } 2.2$$

C.

$$6y \text{ and } 6x$$

D.

$$5d^2 \text{ and } d^2$$

E.

$$30 \text{ and } -25$$

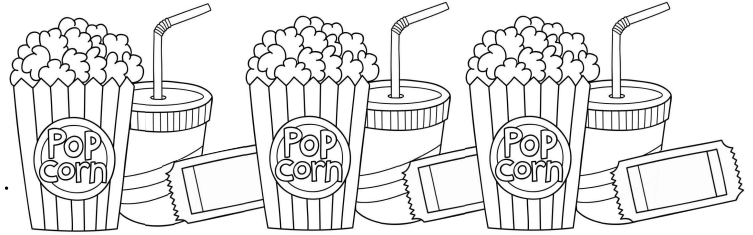
SIMPLIFYING EXPRESSIONS

- We can simplify algebraic expressions by combining _____.
- Be careful when you are combining terms to check the _____ that is in front of the term.

A group of friends went to the movies and bought the tickets (t), drinks (d) and popcorn (p) shown.

• Use the given variables to write an expression representing the individual items purchased:

• Simplify the expression by combining like terms.



In 6-11, simplify each expression by combining like terms.

6. $13r + 5r + 2n$ _____	7. $-k + 16 - 12k$ _____	8. $7m + 19g - 10m + 6g$ _____
9. $-18.7b + 4b - 0.3b$ _____	10. $\frac{1}{2}b - 9 + 8b - 7 - b + 14$ _____	11. $-1.2k + 10.9 - g + 0.5g + 0.3k$ _____

Apply your knowledge of simplifying expressions to answer each of the following.

<p>12. Simplify an expression for the perimeter of the rectangle.</p> <p>$17.4x - 0.8$ cm</p> <p>6x cm</p> <p>Perimeter: _____</p>	<p>13. Darci simplified the expression as shown below. Explain Darci's mistake and give the correct simplified expression.</p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 10px auto;"> $\frac{1}{4}m + 8 + \frac{1}{4}m + n - 4n$ $8\frac{1}{2}m - 3n$ </div>
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Summarize today's lesson:

SIMPLIFYING EXPRESSIONS

Match each expression with the correct simplified expression. Use the corresponding letter with each solution to help you solve the riddle.

<p>1</p> $4x - 2x - 20x + x$	<p>2</p> $-\frac{4}{7} + \frac{2}{7}x - 14x + \frac{4}{7}$
<p>3</p> $7 - 9x - 15 + 12x$	<p>4</p> $-2.4x + 3.8x - x$
<p>5</p> $-0.8x + 40 - 8x - 35$	<p>6</p> $12\frac{5}{6}x - 14x + \frac{1}{6}x$
<p>7</p> $-3x + 14 - 11 + 11x$	<p>8</p> $3.75x - 5 - 8.75x + 4.5 + 0.5$

A: $-5x$	E: $-8.8x + 5$	O: $3x - 8$	L: $0.4x$	G: $-x$	W: $8x + 3$
R: $-17x$	B: $-13\frac{5}{7}x$	M: $-8x$	U: $-2\frac{1}{6}x$	D: $-13\frac{1}{7}x$	N: $-5.5x$

WHAT IS A BIRD'S FAVORITE SUBJECT?

3 7 4 6 5 2 1 8