

11-13-18

Aim: SWBAT simplify expressions.

HW: Packet Page 13

Do Now: Correct hw, then Quiz

## HOMEWORK

Given the expression:  $9x^2 + 11x - 12 - 5x^2 + 3x - 8$

Handwritten annotations: 1st, 2nd, 3rd, 4th, 5th, 6th terms are labeled above the expression. The terms are circled or boxed:  $9x^2$  (boxed),  $11x$  (circled),  $-12$  (circled),  $-5x^2$  (circled),  $3x$  (circled),  $-8$  (circled).

- 1) How many terms are in this expression? 6
- 2) State the coefficient of the fourth term. -5
- 3) State the coefficient of the second term. 11
- 4) Name the constant term(s). -12 and -8
- 5) State a like term for the first term.  $-5x^2$
- 6) State a like term for the second term.  $3x$
- 7) State a like term for the third term.  $-8$

What are the steps to simplifying an expression?

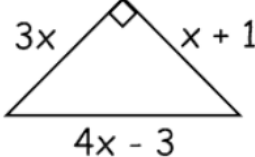
- Step 1) Eliminate parentheses with distribution
- Step 2) Combine Like Terms

Simplify each expression by using the Distributive Property.

- 1)  $7(n + 6) = 7n + 42$
- 2)  $5(3x + 12) = 15x + 60$
- 3)  $6(5y - 10) = 30y - 60$
- 4)  $4(x - y) = 4x - 4y$
- 5)  $12(x - 7) = 12x - 84$
- 6)  $7(9x + 4y) = 63x + 28y$
- 7)  $-2(-3 + 5x) = 6 - 10x$
- 8)  $-5(6x - 3) = -30x + 15$
- 9)  $-7(7 + 2y) = -49 - 14y$
- 10)  $-(8x + 11) = -8x - 11$
- 11)  $-(6x - 3) = -6x + 3$
- 12)  $-(-7 + 2y) = 7 - 2y$
- 13)  $-7(x - 8) = -7x + 56$
- 14)  $9(2x + 8) = 18x + 72$
- 15)  $-3(-8x + 12) = 24x - 36$
- 16)  $5(-8x + 10) = -40x + 50$
- 17)  $y(4x - 7) = 4xy - 7y$
- 18)  $-(6x - 13) = -6x + 13$
- 19)  $5(-3x + 10y - 7) = -15x + 50y - 35$
- 20)  $-8(6x + 9y + 3z) = -48x - 72y - 24z$

**Aim:** SWBAT simplify expressions.

**Do Now:** Simplify each expression by combining like terms.

	A	B	C
1	$-5n + 7n$	$-10x - 6x$	$21n - n$
2	$13x + 21y + 14x + 29y$	$13ab - 7a - 2ab - -6a$	$-20y^2 - 30y + 8y^2 - 18y$
3	<p>Find the perimeter of the triangle in simplest form. (Remember, perimeter is the distance around the outside of a polygon.)</p> 		

**Simplifying an Expression requires a two-step process in a specific order.**

Step 1: Eliminate parentheses by distributing

Step 2: Combine like terms

**Answers also have requirements. Most often, answers should be in standard form. That means...**

- No double signs
- Terms are in alphabetical order
- The constant is last

CLASSWORK:

Simplify each expression.

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	A	B
4	$2(4 + 3x) + x$ $8 + 6x + x$ $6x + x = 7x$ $8 = 8$ $7x + 8$	$3(6x + 2y) + 22x$ $18x + 6y + 22x$ $18x + 22x = 40x$ $6y = 6y$ $40x + 6y$
5	$-5(2 + 3x) + 2(4x + 2)$ $-10 - 15x + 8x + 4$ $-15x + 8x = -7x$ $-10 + 4 = -6$ $-7x - 6$	$15y - 3(6y + 4) + 8$ $15y - 18y - 12 + 8$ $15y - 18y = -3y$ $-12 + 8 = -4$ $-3y - 4$
6	$-(m - 1) + 4m + 2$ $-m + 1 + 4m + 2$ $-1 + 4$ $-m + 4m = 3m$ $1 + 2 = 3$ $3m + 3$	$4a - 6 - 2(3a - 1)$
*7	$(3x + 2) + (5x + 7)$	$(-5x + 12) - (8x + 11)$

## HOMEWORK

Simplify each expression.

	<b>A</b>	<b>B</b>	<b>C</b>
<b>1</b>	$6(x + 2) + 8x$	$18y + 5(7 + 3y)$	$-(x + 2) - 8x$
<b>2</b>	$-7x^2 - 2x - 8x^2 + x$	$-16mn + 4m + 2mn - m$	$-30xy - 5x + 2xy - 7x$
<b>3</b>	$5(x + 2y) - 4y - 7x$	$-2(2x + 1) + 3x - 5$	$8y - 2(3y - 4) + 2$
<b>4</b>	$-3(2x - 4)$	$-5(-8x - 2y + 4)$	$-4(2x - 6) - 7x - 5$
<b>5</b>	$-7(-2 + 4x) - 13x + 25$	$-10(-5x + 8) - 15 + 25x$	