**7th Grade
Feb 12, 2021**

Today we will:

-Take some more notes/do examples
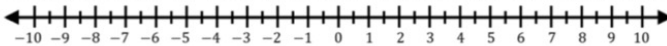
-Work on white boards

HOMEWORK:

ALEKS assignment:
60 min and 5 topics
due Monday by 11:59pm

Name _____

Unit ____ Lesson _____ Due Date _____

OPERATIONS WITH RATIONAL NUMBERS CHEAT SHEET

$$-10\ -9\ -8\ -7\ -6\ -5\ -4\ -3\ -2\ -1\ \ 0\ \ 1\ \ 2\ \ 3\ \ 4\ \ 5\ \ 6\ \ 7\ \ 8\ \ 9\ \ 10$$

	SAME SIGNS	DIFFERENT SIGNS
ADD	Add the absolute values. Keep the sign. $(positive) + (positive) = positive$ $(+2) + (+3) = +5$ $(negative) + (negative) = negative$ $(-2) + (-3) = -5$	Subtract the absolute values. Keep the sign of the greater absolute value. $(+2) + (-3) = -1$ $(-2) + (+3) = +1$
SUBTRACT	<td colspan="2">Add the additive inverse. Change the operation to addition. Flip the sign of the second number. $(-2) - (+3) = (-2) + (-3)$ Then solve using the rules for addition. $(-2) + (-3) = -5$</td>
MULTIPLY	The answer is positive. $(+4) \cdot (+2) = +8$ $(-4) \cdot (-2) = +8$	The answer is negative. $(+4) \cdot (-2) = -8$ $(-4) \cdot (+2) = -8$
DIVIDE	The answer is positive. $(+8) \div (+2) = +4$ $(-8) \div (-2) = +4$	The answer is negative. $(+8) \div (-2) = -4$ $(-8) \div (+2) = -4$
	SAME SIGNS	DIFFERENT SIGNS

Steps for simplifying algebraic expressions:

1) Change any minus signs to plus a negative

   Example: $2x - 3(4x - 7) = 2x + -3(4x + -7)$

2) Distribute the number in front of the parentheses across all the terms inside

   Example 1: $5(x + 2) = 5x + 10$

   Example 2: $-8(y + -4) = -8y + +32$

3) Combine like terms

   Example: $2x + -3(4x + -7)$

   $= 2x + -12x + +21$

   $= -10x + 21$

Examples for integer operations practice:

$$-2 + 5 = 3$$
$$2 + ^-8 = -6$$
$$7 + (-9) = -2$$
$$-4 + ^-10 = -14$$
$$8 + (+1) = 9$$

Examples for distributive property practice:

$$6(x+2) = 6x + 12$$
$$3(2-y) = 6 - 3y$$
$$-2(2x+1) = -4x + -2$$
$$-3(h + ^-4) = {}^-3h - ^-12$$
$$-3h + +12$$

Examples for combining like terms practice:

$$2x + 3x + 4 + 4x = 9x + 4$$
$$-2x + 3x + 6 = x + 6$$

$$5(n+3) + 2n =$$
$$5n + 15 + 2n =$$
$$7n + 15$$

$$-3(m+1) + 4m + 2 =$$
$$-3m + +3 + 4m + 2 =$$
$$m + 5$$

White board practice:

$$2x + 3x + 4 + 4x = 9x + 4$$

$$-2a + 3a + 6 = 1a + 6 = a + 6$$

$$-4x + {}^-6x + {}^-5 = -10x + -5$$

or $-10x - 5$

$$5(2x - 1) = 10x - 5$$

$$6(-2 + 3x) =$$

$^-12 + ^-18x$ or $-12 - 18x$

$$2(-7x + 6) + 3x =$$

$^-14x + 12 + 3x$

$\boxed{-11x + 12}$

$$-3(-2x + 2) - 6 =$$

$$6x + 6 - 6 = \boxed{6x}$$

Math
Chapter
7

TITLE:
Linear Expressions

Date	Lesson	Topic/Assignment
Feb 8	1	Distributive Property Video Notes
Feb 9	1	HOMEWORK: pg295
Feb 10	2	Simplifying Algebraic Expressions Video Notes
Feb 11	2	HOMEWORK: HW Practice WS
Feb 12	2	More Notes and Examples