3.2

Adding and Subtracting Linear Expressions (Day 1)

Review: Adding Integers

-7 + -2 =

-9 + -6 =

-5 + 12=

7 + -11 =

SAME SIGN
- Ignore the signs
- Add numbers
- Put sign back

DIFFERENT SIGNS
- Ignore the signs
- Subtract
- Put sign back of number that "looks" the biggest

Review: Subtracting Integers

1. Change the minus sign to addition
2. Change the second number into the opposite
3. Do the problem like a regular addition problem

$4 - 9 =$ $8 - (-12) =$

$-7 - 6 =$ $-4 - (-11) =$

Review: The Distritutive Property

Use the distributive property for the following:

1) $5(x+3)$

2) $7(x-8)$

3) $-6(x+2)$

<u>Review: Combining Like Terms</u>

Simplify the following:

1) $4k - 10 + 7 + 7k$

2) $10x + 7 - 12x - 4$

3) $8p + 3 - 3p - 4p$

Vocabulary

A <u>linear expression</u> is an algebraic expression in which the _____ of the variable is ____.

Linear Expressions	-4x	3x + 5	5 - 0.25x
Nonlinear Expressions	x^2	$-7x^3 + x$	$x^5 + 1$

Adding Linear Expressions

Find the sum of the following:

Horizontal Method

$a)\ (x-2)+(3x+8)$

Vertical Method

$b)\ (x-2)+(3x+8)$

Use any method to find the sum of the following:

$c)\ (-4y+3)+(11y-5)$

Practice

1) $(x+3)+(2x-1)$

2) $(-8z+4)+(8z-7)$

3) $(p-3)+(p-7)$

4) $(3n-1)+(4-n)$

...with the Distritubutive Property

a) $2(-7z + 3) + (5z - 2)$

b) $(4 - n) + 2(-5n + 3)$

c) $3(w - 4) + (w + 12)$

Practice

5) $6(x-3)+(2x-9)$

6) $(-6y-2)+5(3+4y)$

Subtracting Linear Expressions

Find the difference of the following:

$a)$ $(5x+6) - (-x+6)$

$b)$ $(7y+5) - 2(4y-3)$

7) $(m-3) - (-m+12)$

8) $(2n-4) - (4n-3)$

9) $(c+2) - 5(2c+4)$