Warm up #1

Combine Like Terms

1) $3x - 6 + 2x - 8$ $5x - 14$

2) $3x - 7 + 12x + 10$ $15x + 3$

Exponent Rules

3) What is $2x \bullet 3x$? $6x^2$

Unit 1
Relationships Between Quantities & Expressions

VOCABULARY

Degree

The exponent for a variable

Degree of the Polynomial

Highest (largest) exponent of the polynomial

Standard Form

Terms are placed in descending order by the DEGREE

★Write all answers in Standard Form!

Leading Coefficient

Once in standard form, it's the 1st NUMBER in front of the variable (line leader)

# of Terms	Name by # of Terms
	Mono*mial*
2	***Bi****nomial*
3	***Tri****nomial*
4+	***Poly****nomial*

Degree *(largest exponent)*	**Name by degree**
0	*Constant*
1	*Linear*
2	*Quadratic*
3	*Cubic*

Special Names:

$$-2y + 9$$

Degree Name: Linear

# of Terms Name: Binomial

Leading Coefficient: -2

Special Names:

$$34x^3$$

Degree Name: Cubic

# of Terms Name: Monomial

Special Names:

$$4x^2 + 6x$$

Degree Name: Quadratic

# of Terms Name: Binomial

Leading Coefficient: 4

Special Names:

$$7y + y^3 - 2y^2$$

Degree Name: Cubic

# of Terms Name: Trinomial

Leading Coefficient: 1

Adding Polynomials

I.

$$\left(2x^2-4x+3\right)+\left(x^2+5x-1\right)$$

$3x^2 + x + 2$

2.

$$(6+x^2)+(2x-8)$$

$x^2 + 2x - 2$

Subtracting Polynomials

◎When SUBTRACTING polynomials

Distribute the NEGATIVE

3. $\left(3a^2+10a\right)-\left(8a^2-a\right)$

$3a^2 + 10a - 8a^2 + a$

$-5a^2 + 11a$

4.

$$(3x^2 + 2x - 4) - (2x^2 + x - 1)$$

$$3x^2 + 2x - 4 - 2x^2 - x + 1$$

$$x^2 + x - 3$$

Classwork

Homework

#1 - #10

Warm – Up #2

Add or Subtract the following polynomials:

1. $(x^3 - 2x^2 + 3x + 6) + (4x^2 - 7x + 4)$

2. $(2x^3 + 4x^2 - x + 1) - (-x^3 + 4x^2 - 2)$

Warm – Up #3

Andy and Sam are saving money to go on their senior trip.

The amount of money that Andy will have at the end of each week, w, can be expressed at $A(w) = 20w + 300$. The amount of money that Sam will have at the end of each week, w, can be expressed at $S(w) = 15w + 400$.

They have decided to combine their savings accounts. Write a function that expresses the total amount, $T(w)$ they have in their savings account at the end of each week.

Multiplying Polynomials

5. $-2x(x^2 - 4x + 2)$

$$-2x^3 + 8x^2 - 4x$$

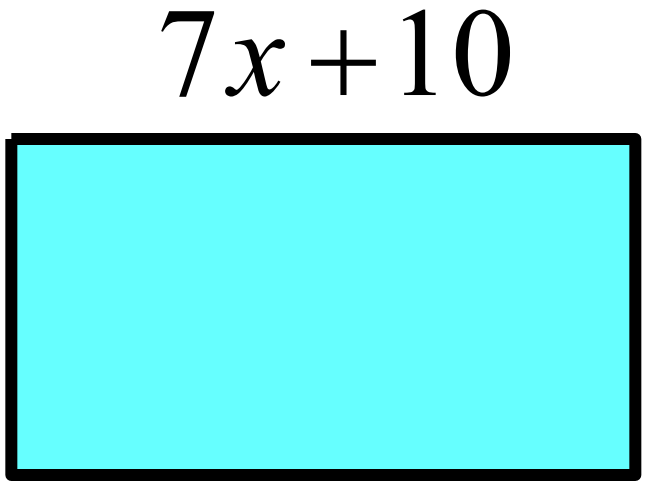
6. $(x + 3)(x - 3)$

$x^2 - 9$

7. $(3x - 1)(2x - 4)$

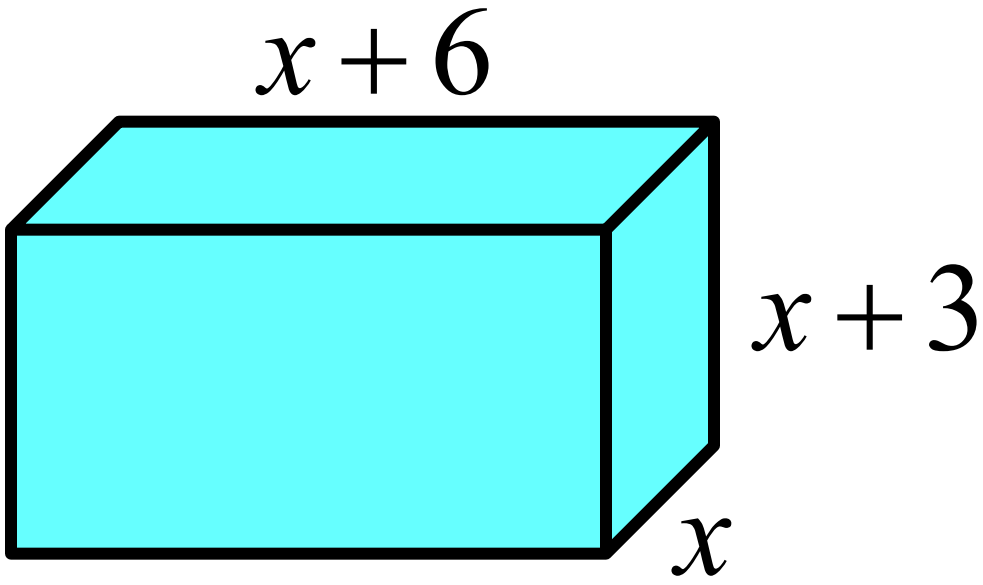
$$6x^2 - 14x + 4$$

8. Find the **area** of the rectangle.



$$28x^2+96x+80$$

9. Find the **volume**.



$$x^3+9x^2+18x$$

Warm – Up #4

Simplify the expression: $(x + 3)(2x - 1)$

A) $7x^2 - 3$

B) $2x^2 - 7x - 3$

C) $2x^2 - 5x - 3$

D) $2x^2 + 5x - 3$