Lesson 3.3. 14.2

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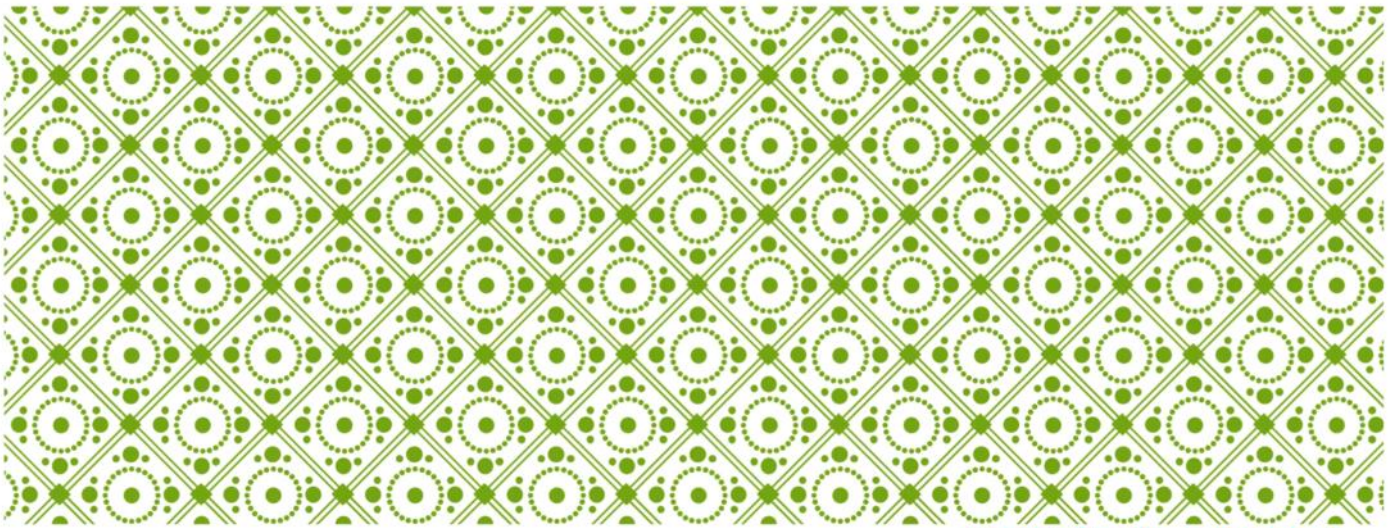
QUIZ

Take out your Homework so I can check it.



LESSON 3.3/14.2
WRITING EXPRESSIONS
ADD AND SUBTRACT POLYNOMIALS

Goal: To identify , evaluate and use operations with expression/polynomials.

Obj: SWBAT write expressions from real world context.

Obj: SWBAT add and subtract polynomials.

ALL WRITE ROUND ROBIN

In your notebook make 4 columns. Label the columns ADDITION, SUBTRACTION, MULTIPLICATION, DIVISION.

You have 30 seconds to write down as many "clue words" that can describe each mathematical operation.

Then starting with person 3, share one "clue word" at a time. Write down any "clue words" that are shared in the round robin.

Debrief

+	−	•	÷
combine	Subtract	product of	quotient
plus	take away	time	divide
Sum	minus	distribute	
more than	difference	factors	
		multiply	

PROBLEM 1:

.105 ← 10.5%

"The base salary of $500 ~~per week~~ plus a commission of 10.5% of sales." Write an expression that represents the total salary for the week.

base $ + commission

$500 + .105s$

"The price of lunch plus a 15% tip for lunch" Write an expression.

$p + .15p$

.15

"Jim earns $450 per week however $90 is taken away in taxes." Write an expression.

$450w - 90$

PROBLEM 1A:

Write an expression for each situation.

"Three divided by the sum of 10 and x"

3 ÷ +

3 ÷ (10 + x)

"Five more than the sum of a number and 10"

5 + +

5 + (x + 10)

PROBLEM 1B:

Jimbob collected 7 more than 2 times as many recyclable bottles as Natasha. Write an expression for the number of bottles they collected together.

PROBLEM 2:

Mr. Sica has an army of 1500 minions. He sends them to war with an evil army of squirrels. Mr. Sica lose 25 minions per day from the evil squirrels attacks.

Write an algebraic expression to represent the total number of minions left after (d) days of the squirrel war.

$1500 - 25d$

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PROBLEM 2A:

In the year 2000, the enrollment in Seminole High School was 2460 students. Over the past 16 years. The enrollment increased by 40 students per year.

Write an algebraic expression to represent the total number of students after (x) years.

PROBLEM 3B:

Marco rode 120 miles on the first day of his cross-country bicycle trip. He planned to ride an additional 100 miles each day.

Write an algebraic expression to represent the total number of miles he will ride after (d) days have passed.

PROBLEM 2C:

Alex purchased a phone card for $30. He has used (t) minutes of access time at 10 cents per minute.

Write an algebraic expression to represent how many dollars Alex has left on his card.

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PROBLEM 3: same variable, same exponent } combine like terms

Add or subtract the polynomials.

$(6x + 3x^2 + 5x^3) + (6x^2 + 4x - 7x^3)$

$6x + 3x^2 + 5x^3 + 6x^2 + 4x - 7x^3$

$-2x^3 + 9x^2 + 10x$

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PROBLEM 3A:

Add or subtract the polynomials.

$(4x^3 + 7x + 5x^2) - (5x^2 + 5x^4 + 2x^3)$

$4x^3 + 7x + 5x^2 - 5x^2 - 5x^4 - 2x^3$

$-5x^4 + 2x^3 + 7x$

PROBLEM 3B:

Add or subtract the polynomials.

$$(3 - 4x^3 - 5x - 7x^4) + (8x^3 - x^4 - 2)$$

PROBLEM 3C:

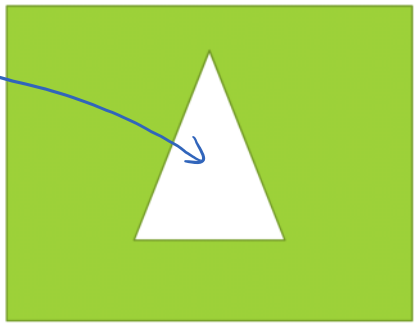
Add or subtract the polynomials.

$$(5 + 3x^3 + 5x^2 - x^4) - (3x^2 - 7x^3 - 4x^4)$$

PROBLEM 4:

In square inches, the area of the square is $5x^2 + 6x - 3$ and the area of the triangle $3x^2 - 3x + 5$. What polynomial represents the area of the shaded region?

$3x^2 - 3x + 5$



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

$5x^2 + 6x - 3 - 3x^2 + 3x - 5$

$2x^2 + 9x - 8$ area of the shaded region

$5x^2 + 6x - 3$

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PROBLEM 4A:

The area of the shade triangle is $2x^2 + 3x + 6$. What is the area for the entire figure are a polynomial?

$2x^2 + 3x + 6$

$+ 2x^2 + 3x + 6$

$+ 2x^2 + 3x + 6$

$6x^2 + 9x + 18$

$3(2x^2 + 3x + 6)$

$6x^2 + 9x + 18$

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PROBLEM 4B:

The area of the large rectangle is $5x^2 + 3x + 7$ and the area small rectangle is $2x^2 + 3$. What is the area of the shaded green region as a polynomial?