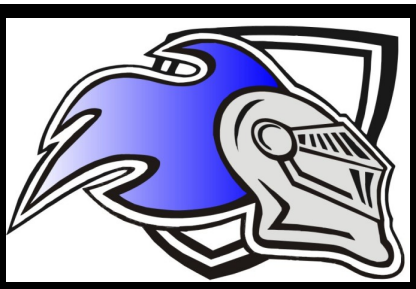

St. Peter Catholic High School
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Jan 27-10:05 AM

Review

BEDMAS;

Recall what BEDMAS stands for:

Brackets
Exponets
Division & **M**ultiplication
Addition & **S**ubtraction

This simply tells you the order in which you must perform calculations when EVALUATING.

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Example: Evaluate: $4(3+1)^2 - 10$

If we simply did this in order of chronology (left to right) then we would get 159. This is incorrect.

Are there brackets? Yes... so evaluate them to get:
$4(4)^2 - 10$
Are there exponents? Yes... so evaluate it to get:
$4(16) - 10$
Is there division or multiplication? Yes... multiplication so..
$64 - 10$
Is there addition or subtraction? Yes... subtraction so..
54

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Try this one: Evaluate: $\frac{3(7+1)^2 - 12}{4}$

Jan 27-10:48 AM

Try this one: Evaluate: $\frac{3(7+1)^2 - 12}{4}$

Solution:

Are there brackets? Yes... so evaluate them to get:

$\frac{3(8)^2 - 12}{4}$

Are there exponents? Yes... so evaluate it to get:

$\frac{3(64) - 12}{4}$

Is there division or multiplication? Yes... both so..

$48 - 12$

Is there addition or subtraction? Yes... subtraction so..

36

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The Addition of Fractions

When dealing with the addition of fractions, all you have to remember is to find the common denominator! So when you have say:

$$\frac{a}{c} + \frac{b}{d}$$

just remember that you cannot add them immediately. You must make the denominators the same! Hence let us multiply both fractions by 1 in the (d/d) and (c/c) to get:

$$\frac{(d)(a)}{(d)(c)} + \frac{(b)(c)}{(d)(c)}$$

Notice that the denominators are now equal to each other!

Jan 27-11:03 AM

The Addition of Fractions

Now that the denominators are the same, you can add the numerators to get:

$$\frac{ad + bc}{cd}$$

Notice how we do not add the denominators!

Jan 27-11:09 AM

Example: Let's try it with a real fraction!

$$\frac{5}{6} + \frac{1}{7}$$

What is the common denominator? What does 6 and 7 have in common? 6x7=42, hence 42.

$$\frac{(7)(5)}{(7)(6)} + \frac{(1)(6)}{(7)(6)}$$

$$\frac{35}{42} + \frac{6}{42}$$

$$\frac{41}{42}$$

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Example: Now you try one:

$$\frac{9}{16} + \frac{3}{4}$$

What is the common denominator? What does 16 and 4 have in common? 4 goes 4 times into 16 so the common denominator is 16.

$$\frac{9}{16} + \frac{(3)(4)}{(4)(4)}$$

$$\frac{9}{16} + \frac{12}{16}$$

$$\frac{21}{16}$$

Jan 27-11:11 AM

The Subtraction of Fractions

TOP SECRET: There is no such thing as subtraction!!! When you think you are subtracting, you are only adding NEGATIVE numbers. Hence there is no difference when subtracting fractions. For example:

$$\frac{a}{c} - \frac{b}{d}$$

$$\frac{(d)(a)}{(d)(c)} - \frac{(b)(c)}{(d)(c)}$$

$$\frac{ad - bc}{cd}$$

The only difference is the subtraction symbol!!!

Jan 27-11:12 AM

The Multiplication of Fractions

YOU'VE BEEN FOOLED!!! Review your notes on The Addition and Subtraction of Fractions. Notice that you've already been multiplying fractions? Look carefully:

$$\frac{a}{c} \pm \frac{b}{d}$$

$$\frac{(d)(a)}{(d)(c)} - \frac{(b)(c)}{(d)(c)}$$

$$\frac{ad - bc}{cd}$$

Hence, if you already know how to add and subtract fractions, then you already know how to multiply them!

Feb 1-10:02 AM

The Multiplication of Fractions

As formality though:

$$\frac{(a)}{(c)} \times \frac{(b)}{(d)}$$

$$\frac{ab}{cd}$$

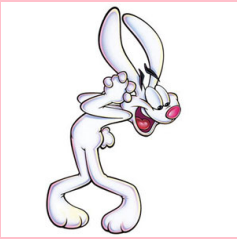
Example:

$$\frac{7}{10} \times \frac{3}{13}$$

$$\frac{21}{130}$$

Feb 1-10:04 AM

The Multiplication of Fractions



Remember that TRICKS are for kids:

$$\frac{25}{12} \times \frac{3}{5}$$

Recall that it does not matter in which order to do multiplication or division. So you can rearrange the fraction to look like:

$$\frac{3}{12} \times \frac{25}{5}$$

$$\frac{1}{4} \times 5$$

$$\frac{5}{4}$$

Feb 1-10:07 AM

The Division of Fractions

BOYCOTT! Refuse to divide!!! That's right, we refuse to divide fractions. When faced with division, you immediately change it to multiplication while performing the RECIPROCAL onto the second fraction so...

$$\frac{a}{c} \div \frac{b}{d}$$

Becomes....

$$\frac{a}{c} \times \frac{d}{b}$$

And now we're back to multiplication!!!

$$\frac{ad}{cb}$$

Feb 1-10:11 AM

The Division of Fractions

Example:

$$\frac{4}{5} \div \frac{5}{7}$$

Becomes....

$$\frac{4}{5} \times \frac{7}{5}$$

And now we're back to multiplication!!!

$$\frac{28}{25}$$

Feb 1-10:15 AM

FRACTIONS ANCHOR CHART!!!

As an activity, we will make a poster (Anchor Chart) for the year so that we can refer to these simple rules for the rest of the semester!

Feb 1-10:18 AM