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| <p>BIG PICTURE of this UNIT:</p> | <ul style="list-style-type: none"> • The methods and ways we go about solving problems • Solidifying our understanding of some basic mathematics • But first we must review some of the larger topics from 8th Grade. | | |
| <p>CONTEXT of this LESSON:</p> | <p>Where we've been We are working with all kinds of math to try strength skills needed for linear.</p> | <p>Where we are Practicing all kinds of problems .</p> | <p>Where we are heading Continue to work with problem solving.</p> |

Lesson Objectives:

1. Continue to work with problems of all types.
2. Find your areas of strength...and areas where you struggle.
3. Continue to develop communication skills in mathematics.

Fast Five

Solve for x:

1. $2x = 6$

2. $x + 9 = 31$

3. $-2x + 6 = 13$

4. $\frac{1}{2}x - 9 = \frac{4}{5}$

5. $2(x-7) = 15 \rightarrow 2x - 14 = 15$

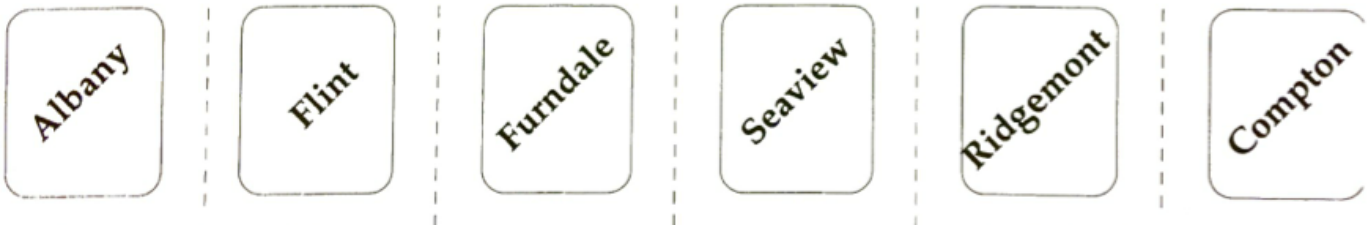
6. $x^2 = 49$

$x = -\frac{7}{2}$

$x = \frac{29}{2}$

Opening Activity - Interstate 99

- Each person in your group gets a clue. DO NOT show your clue to anyone else in the group.
- Communicate with each other to figure out the order of the cities from North to South
- Record all of your thinking and working to show me how you came to your answer. Be ready to explain your process!



Clue 1

Interstate 99

Albany and Flint are the closest cities to each other; Albany is just one mile south of Flint.

Order the cities North to South.

Clue 2

Interstate 99

Leaving Flint, you pass next through Furndale on your way to Seaview.

All six of the cities are on Interstate 99.

Clue 3

Interstate 99

The city of Ridgemont is north of Albany and the city of Compton is south.

Interstate 99 is a big highway that runs from North to South.

Clue 4

Interstate 99

The city of Seaview is on Lake Michigan and this is where Interstate #99 ends.

Order the cities North to South.

Bonus Clue 1

Interstate 99

There are six cities along this stretch of Interstate #99.

Order the cities North to South.

Bonus Clue 2

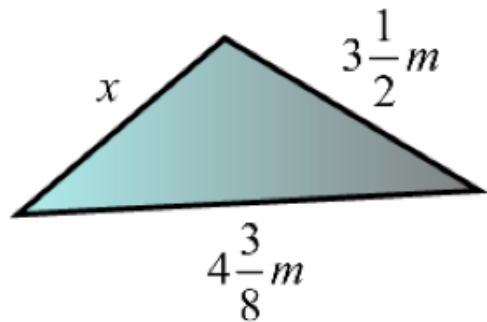
Interstate 99

Seaview and Compton are the furthest apart.

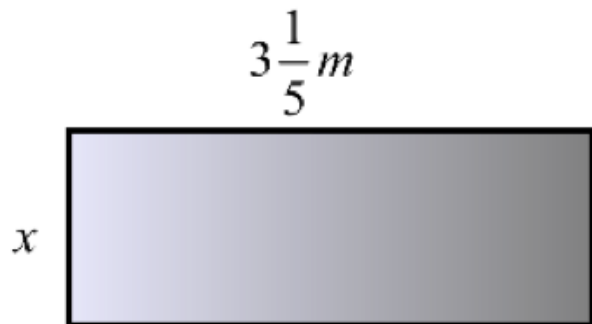
Order the cities North to South.

Continued Work with Fractions

1. Perimeter = $11\frac{1}{8}m$ Find x .



2. Area = $4\frac{4}{15}m^2$ Find the perimeter



Find the quotient. Try them out, SHOW ALL YOUR WORK!

1. $\left(\frac{2}{10} - \frac{3}{7}\right) \div \left(\frac{6}{9} + \frac{3}{8}\right)$

2. $\frac{2xy^2}{8a^3b^4} \div \frac{2ab}{4x^2y^2}$

Evaluate the expressions when $x = 2$, $y = -3$ and $z = -10$.
SHOW YOUR WORK!

$$\left(xyz + xy - yz + \frac{xy(-z)}{-4(x-y)} \right)$$

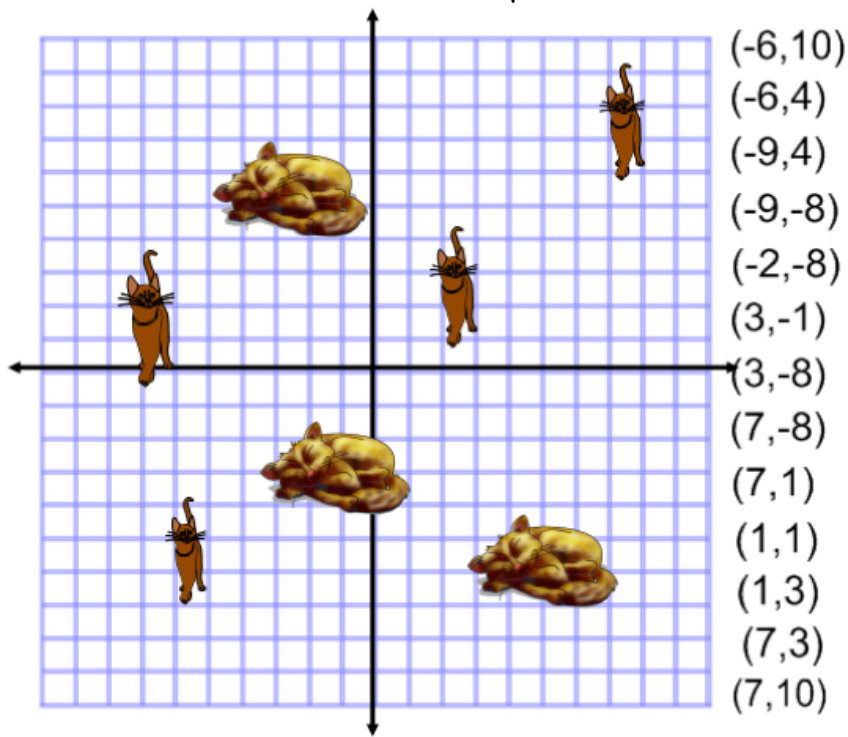
Use the distributive property or combining like terms to simplify.
SHOW YOUR WORK!

1. $5n + 3(8n - 7) + 6n - 31$ 2. $-2x(8x - 7) - 7x + 6 - 2(5x + 10)$

The shortest side length of a four sided figure is x meters. The second side is 4 meters longer than the first side. the third side is 8 meters longer than the second side. the fourth side is 6 meters shorter than the third side. Please draw a picture to help with this problem. **SHOW YOUR WORK!**

1. Write and simplify an expression finding the perimeter of this figure where the first side is x meters long.
2. Find the perimeter when $x=3$.
3. If the perimeter is 46 meters, how long is the shortest side?

Ms. A and Ms. V need to create a fence to hold their cats in the yard. Ms. A divided the yard into a grid system. Ms. V suggested the below coordinates as places to put the fence posts and surround all the cats. Does Ms. V's plan work? If not fix it!



Start at the top and work down, as you plot the points... Connect them in the same order.

Homework

Complete previous 5 slides