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Warmup 12/(The square root of Christmas)

Make sure there is a whiteboard, marker, & eraser in your desk. JUST ONE OF EACH.

 Find <u>as many points as you can</u> that would be on the graph of the equation 5x + 2y = 60.

 $\begin{array}{cccc} (12, 0) & (14, -5) \\ (0, 30) & (6, 15) & (4, 20) \\ (10, 5) & (2, 25) & (8, 10) \\ (10, 5) & (2, 25) & (1, 27.5) \\ (20, -20) & (9, 7.5) \end{array}$

Food privileges...

Honors Math 8 Midterm

- Will be on Tuesday morning of the last week before break
- This is not a high school-credit class, so the midterm will NOT be worth 20% of your grade
- It will be worth the same as a normal test grade
- 50 questions multiple choice
- Students usually are excited to hear that it's multiple choice, but I'm just warning you – the scores are almost always lower on multiple choice
- This is for two major reasons:
 - No partial credit
 - Distractor answers

Example: Find the slope





Midterm Review Packet

- It is worth a big-ish grade, but THIS IS NOT THE MAIN PURPOSE OF IT!
- The purpose of the study assignment is to refresh your memory and understand the concepts.
- The more seriously you take this midterm review packet, the better you will do on the midterm!!!

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Solving Systems by Substitution¹

Objective:

-Use a new strategy (substitution) to solve systems of equations. (No graphs, just pencil/paper) **19**



CHECK: Solution: (9, 3)2x - y = 152(9) - 3 = 1518 - 3 = 1515 = 15 🗸

WHITEBOARDS

Substitution Strategy:

- If y = (stuff) you can replace the y from the other equation with the (stuff)
 - Same with x = (stuff)

Solve by Substitution 6x + 4y = 8y = -2x

(-4, 8)



y = 2x - 33x + y = 7

(2, 1)

Solve the System of Equations using Substitution

y = 2x - 21y = 5x - 3

(-6, -33)

Even harder?

x + 2y = 2y = x + 4

Example 2: $x + 2y_{x} = 2$ y = (x + 4)x + 2y = 2x + 2(x + 4) = 2x + 2x + 8 = 23x + 8 = 23x = -6x = -2

y = x + 4y = -2 + 4y = 2

(-2, 2)

• ***IMPORTANT***

• When you substitute, always put what you are substituting in parentheses

Whiteboard:

4x - 6y = 4x = 2y - 5

(19, 12)

Whiteboard:

y = 3x + 88x + 4y = 22



Story Problem

 Tommy and Chuckie have 60 bottles all together. Chuckie has 3 times as many bottles as Tommy. How many bottles do they each have?

• T + C = 60
• ***IS IT:
$$T = 3C$$
 or $C = 3T$?? Discuss.

•
$$\begin{cases} T + C = 60 \\ C = 3T \end{cases}$$
 Tommy has 15 bottles, Chuckie has 45 bottles

Using a bar diagram...

 Tommy and Chuckie have 60 bottles all together.
 Chuckie has 3 times as many bottles as Tommy. How many bottles do they each have?



 $\mathbf{x} + \mathbf{3x} = \mathbf{60}$

Story Problem

 Phil and Lil have 42 pacifiers all together. Phil has 8 more pacifiers than Lil. How many pacifiers do they each have?

$$\begin{array}{l} \bullet \begin{cases} P+L=42\\ L+8=P \end{array}
\end{array}$$

Phil has 25 pacifiers, Lill has 17 pacifiers

Using a bar diagram...

 Phil and Lil have 42 pacifiers all together. Phil has 8 more pacifiers than Lil. How many pacifiers do they each have?



Story Problem if Time:

 Bowl-o-Rama charges \$3 per game plus \$2 for shoe rental, and Bowling Pinz charges \$2 per game plus \$5 for shoe rental. For how many games will the cost to bowl be the same at both places? What is the cost?



Homework:

• p.247 (1 – 10, 14, 15)