WARMUP 11/ *(#of sides on a hexagon)*

Today's warmup will be on a notecard. On your warmup page, just write "notecard."

1. $10 = -4x + 22$

Make sure there is a whiteboard, marker, & eraser in your desk!

2. $\frac{3}{2}b + 12 = 30$

3. $\frac{x+2}{3} = 10$

1. $10 = -4x + 22$

$$\frac{-22 \qquad\qquad -22}{\dfrac{-12}{-4} = \dfrac{-4x}{-4}}$$

$$\boxed{3 = x}$$

2. $\dfrac{3}{2}b + 12 = 30$

$$\frac{\qquad -12 \qquad -12}{}$$

$$\frac{2}{3} \cdot \frac{3}{2}b = 18 \cdot \frac{2}{3} \qquad \nearrow \qquad \frac{36}{3} = 12$$

$$\boxed{b = 12}$$

3. $\dfrac{x+2}{3} = 10^{\times 3}$

$$x + 2 = 30$$

$$\frac{-2 \qquad -2}{\boxed{X = 28}}$$

P.125 (1 – 10)

1) a = 3

2) x = 5

3) c = -4

4) x = 8

5) w = -52

6) x = -2

7) n = 5; 5 bracelets

8) g = 15; 15 ~~bracelets~~ rounds

9) a = 64

10) n = -35

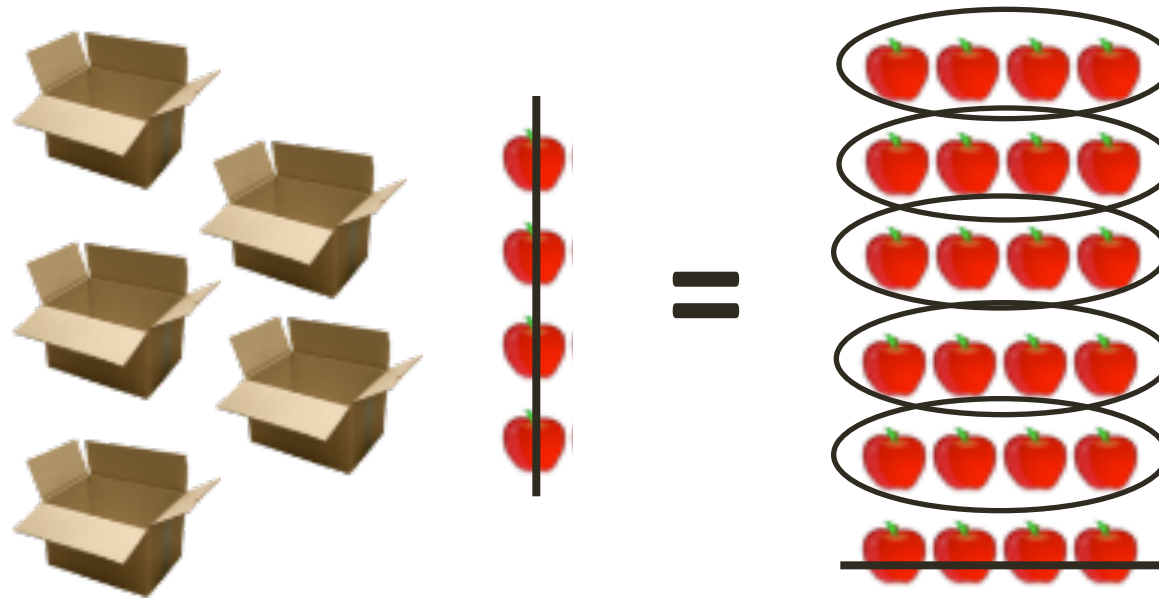**If you did not check your answers by plugging them back in, the highest you can get is a 70.**

ACTIVITY: MULTIPLE VARIABLES

- Sometimes, the variable shows up more than once.

- They can be on the same side…
  - **4x + 2x + 3 = 13**

- …or on different sides.
  - **4x + 3 = 2x + 13**

Boxes and Apples…

$$5x + 4 = 24$$

EXPLORATION: BOXES AND APPLES

- On the pretest, we struggled with what to do when there were multiple terms with variables. Especially when there were variables on both sides. This activity is designed to help you think about how these equations would work.

- **<u>YOU MUST SOLVE EACH PROBLEM BOTH WAYS:</u>**
  - By circling/crossing things out in the picture
  - By showing the steps in the equation

- One person shows it in the picture, the other shows it

Table of Contents

Equations w/ Variables on Both Sides

Objective:

- Solve equations with variables on both sides

- Understand the difference with when they're on the same side and when they're not

BOXES AND APPLES:

Draw a boxes and apples picture for each equation:

$$3x = x + 8$$

$$3x + x = 8$$

FOR EACH EQUATION: (IN YOUR NOTES)

- **Draw a boxes and apples picture**
- **Use the diagram to show how much x is**
- **Show the steps in the equation to solve it. Your steps should match the picture!**

$$4x = 2x + 12$$

$$4x + 2x = 12$$

- **<u>2 variable terms on the SAME SIDE:</u>**
  - Combine like terms

- **<u>2 variable terms on OPPOSITE SIDES:</u>**
  - "Get rid" of one of them: add or subtract the x's on both sides the same way you do with regular numbers

IF YOU KEEP STRUGGLING WITH THESE…

- I am <u>always</u> going to go back to the picture. The pictures really help explain why you solve these the way you do!