# BRING TEXTBOOK!!!



**Created by Mr. Lischwe** 

- 2. -23 + 7
- $3. \quad \frac{3}{5} \cdot 35$
- 4.  $5 \div \frac{2}{5}$
- How many triangles are there? Triangles can be any size.



## New Erasers...

- They are a little fragile. Be gentle with them. DO NOT PULL THEM APART.
- Even more importantly...
- DO NOT DRAW ON THEM!!!



# New Unit: Solving Equations

- I have had a lot of struggling students really improve on this unit!
- What we just got done doing:
  - Bob has \$50. He earns \$8 per hour. Write an equation to show how much he has after "x" hours.

 $\mathbf{y} = \mathbf{8x} + \mathbf{50}$ 

- What we will be doing next:
  - Bob has \$50. He earns \$8 per hour. How long will it take him to have \$170?

### 170 = 8x + 50

# **Pretest: Solving Equations**

- Our next unit is on solving equations.
- I don't want to spend too much time teaching you stuff you already know. I would rather start where you are and go <u>deeper</u>.
- This pretest will help me know where your skills are at right now!
- If you don't know one, that is okay, but you should still try it!!!
- Please show your work.

## Let's start at the beginning...

- One-step equations
- Focusing STRONGLY on equations with fractions

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#### **1 and 2-Step Equations**

#### **Objective:**

- Solve 1 and 2 step equations
- Know how to check a solution

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### First, let's review normal 1-step equations...

1. x + 4 = 11-4 -4 x = 7





### First, let's review normal 1-step equations...

1. 3x = 123 3 1x = 4x = 4





## Equations with a fraction? $6 \div \frac{2}{3}$ $\frac{\frac{2}{3}x = 6}{\frac{2}{3}}$ $\frac{2}{3}$ $= 6 \cdot \frac{3}{2}$ 18 1x = ?2 x = 9= 9

CHECK  $-\frac{2}{3}x = 6$  $\frac{2}{3}(9) = 6?$  $\frac{18}{3} = 6$ -6 = 6It works!

## Faster way:

When there's a fraction in front of the variable...

2  $\frac{2}{3}x = 6$  $\frac{3}{2} \cdot \frac{2}{3}x = 6 \cdot \frac{3}{2}$ 1x = 9x = 9

## Mental Math strategies...



• "2/3 of something is 6"



- If 2/3 is 6, then 1/3 is 3
- The whole thing must be 9!

## **One-Step: Examples**



*x* = 72

2. 
$$-\frac{4}{3}x = 20$$

3. 
$$\frac{15}{8} = \frac{5}{2}x$$

x = -15

$$x=\frac{3}{4}$$

## Mixed Numbers...



x = 9

## **EQUATIONS WITH FRACTIONS: RULES**

- "If there's a fraction in front of the variable, you gotta multiply by the reciprocal."
- THIS WORKS BECAUSE: You are trying to get 1x, and any fraction times its reciprocal is 1!!!
- If you have mixed numbers, you should change them into improper fractions to make them easier to deal with.