

Give an example of each property  
(a different one than in your packet)

1. Transitive Property

$$\text{If } d = 7 \text{ and } 7 = 6 \\ \text{then } d = 6$$

2. Additive Identity

$$20 + 0 = 20$$

Simplify:  $ab = ba$

$$3. \quad \underbrace{2ab} + 4a - \underbrace{3ba} - 9a \\ \quad \quad \quad - 5a - ab$$

$$4. \quad \begin{array}{c} \text{3} \quad \text{5} \quad \text{4} \quad \text{2} \\ \text{3}(2x - 5) - 4(x - 2) \\ 6x - 15 - 4x + 8 \\ \boxed{2x - 7} \end{array}$$

# Solving one and two step equations

Inverse Operations - Operations you do to  
'undo' another operation

+  $\longrightarrow$  -

$X^2 \longrightarrow \sqrt{\quad}$

-  $\longrightarrow$  +

$\times$   $\longrightarrow$   $\div$

$\div$   $\longrightarrow$   $\times$

Solving 1 and 2 step equations

$$\frac{-5x}{-5} = \frac{25}{-5}$$

$$x = -5$$

Check:

$$-5(-5) = 25$$

$$4x + 10 = -14$$

$$\frac{4x}{4} = \frac{-24}{4}$$

$$x = -6$$

$$8 - x = -2$$

$$\frac{-x}{-1} = \frac{-10}{-1}$$

$$x = 10$$

+ property of equality  $\frac{x}{2} - 10 = 30$   
~~10~~ +10

Inverse property of +  $2 \cdot \frac{x}{2} = 40 \cdot 2$   
 $x = 80$

x property of equality

Inverse of x

- property of equality  $14 - 2x = 28$   
~~14~~ -14

Inverse property of +

÷ POE

Inverse x

$-2x = 14$   
~~-2~~ ~~-2~~

$x = -7$

$$15 = -5x + 45$$

-45                      -45

$$\frac{-30}{-5} = \frac{-5x}{-5}$$

$$6 = x$$

$$x = 6$$

> Symmetric  
property

Two friends rent an apartment. They have to pay the landlord two months rent and a \$500 security deposit when they sign the lease. The total amount they pay the landlord is \$2800. What is the rent for one month?

$$\begin{array}{r} \phantom{500} + 2x = 2800 \\ - 500 \\ \hline \phantom{500} + 2x = 2300 \end{array}$$

$$\frac{2x}{2} = \frac{2300}{2}$$

$$\boxed{\$1,150}$$