

**Warm Up!**

- 1.) Write agenda book
- 2.) Place homework on desk
- 3.) Jennifer reads  $p$  pages everyday. After 15 days, she has read 300 pages. Write an equation to represent this situation. (Remember: the variable can not be by itself)

$15p = 300$   
 $300/p = 15$

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**Lesson 11.2: Addition and Subtraction Equations**

Learning Target: I can solve addition and subtraction equations.

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**Golden Rule of Algebra:** "What you do on one side of the equation, you must do on the other."

**Inverse Operations-** undo each other.

To solve an addition equation, use subtraction.

To solve a subtraction equation, use addition.

\*An equation is like a balance scale. The quantity on the left side of the equals sign is **balanced** with the quantity on the right. When you solve an equation, you need to keep the equation **balanced**.

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**THE GOLDEN RULE OF ALGEBRA**

WHAT YOU DO ON ONE SIDE OF THE EQUATION...



... YOU MUST DO ON THE OTHER SIDE.

Feb 4-8:18 AM

**Algebra Lab: Solving Addition Equations using Models**  
 Supplies: Scale paper, "x tile", and colored tiles

An equation is like a balance scale. The quantity on the left side of the equals sign is **balanced** with the quantity on the right. When you solve an equation, you need to keep the equation **balanced**.

To solve an equation using x tiles and colored tiles, remember to add or subtract the same number of tiles from each side of the scale, so that it remains balanced.

**Remember the Golden Rule of Algebra:**  
 "What you do on one side of the equation, you must do on the other."

- 1.)  $x + 4 = 7$
- 2.)  $x + 2 = 6$
- 3.)  $x + 1 = 5$
- 4.)  $x + 2 = 8$

$x + 1 = 3$

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Feb 4-9:58 AM

**Examples:** Solve the addition equations below.

1.)  $y + 8 = 22$   
~~-8 -8~~  
 $y = 14$

2.)  $26 = a + 15$   
~~-15 -15~~  
 $11 = a$

**Examples:** Solve the subtraction equations below.

3.)  $y - 21 = 18$   
 $y = 39$

4.)  $x - 6.75 = 12$   
 $x = 18.75$

**More Practice**

1.)  $5 = w + 1.5$                       2.)  $n + 6.5 = 20$

3.)  $g - 8.97 = 12.4$                       4.)  $104.5 = k - 2$

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**Example:** Joshua wants to buy his mother flowers and a card for Mother's Day. Joshua has \$25 to spend and selects roses for \$21.79. How much can he spend on a card?

$$x + 21.79 = 25$$

$$x = 3.21$$

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**You try:**  
Elise spent \$88.79 at the store. She then had \$44.50 left to buy another outfit. How much money did she originally have? Write and solve an equation to answer the question.

$$x - 88.79 = 44.50$$

$$x = \$133.29$$

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**H.O.T. FOCUS ON HIGHER ORDER THINKING**

**Multistep** A grocery store is having a sale this week. If you buy a 5-pound bag of apples for the regular price, you can get another bag for \$1.49. If you buy a 5-pound bag of oranges at the regular price, you can get another bag for \$2.49.

Grocery Prices	
	Regular price
5-pound bag of apples	\$2.99
5-pound bag of oranges	\$3.99

a. Write an equation to find the discount for each situation using  $a$  for the amount of the discount for apples and  $r$  for the amount of the discount for oranges.

$$1.49 + a = 2.99 \quad 2.49 + r = 3.99$$

b. Which fruit has a greater discount? Explain.

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To do:

1. Homework
2. ALEKS

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