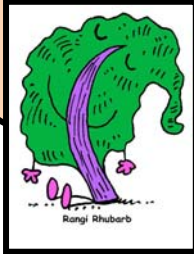


## 7.3 (pg. 302) Solving Equations (Multiplication and Division)

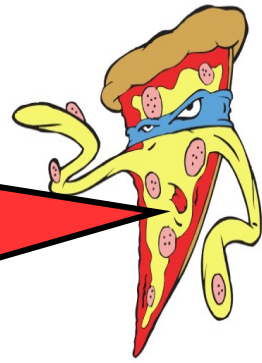
**Coefficient** - a number in front of a variable

Ex.  $3f$ ...the coefficient is 3

$4g$ ...the coefficient is 4



Copy this  
down...so  
says  
Pepperoni  
Pete!



### Division Property of Equality:

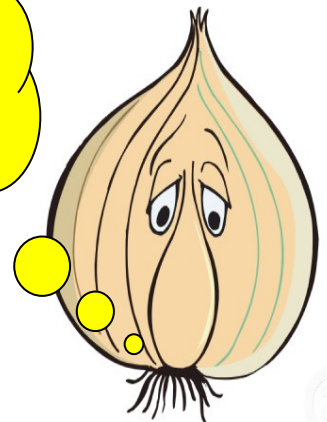
If you divide each side of an equation by the same nonzero number, the two sides remain equal.

Ex:

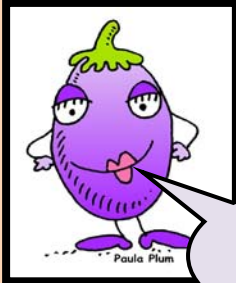
	using numbers		using Algebra
	$10 = 10$		$3f = 12$
	$\frac{10}{2} = \frac{10}{2}$		$\frac{3f}{3} = \frac{12}{3}$
	$5 = 5$		$f = 4$



Math really  
stinks...or  
maybe it's  
just me...

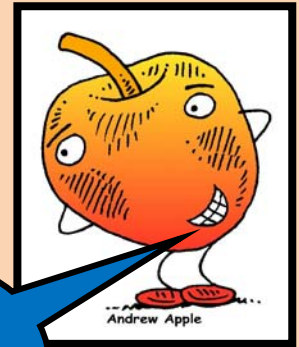


## Multiplication Property of Equality:



Have you seen Bob?

If each side of an equation is multiplied by the same nonzero number, the two sides remain equal.



I keep the doctor away!

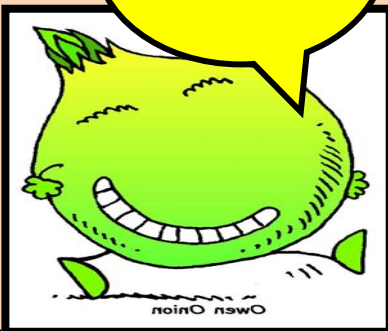


Example:

using numbers

using Algebra

I LOVE Funions!



$$8 = 8$$

$$a = 10$$

$$8(3) = 8(3)$$

$$\frac{a}{5}(5) = 10(5)$$

$$24 = 24$$

$$a = 50$$

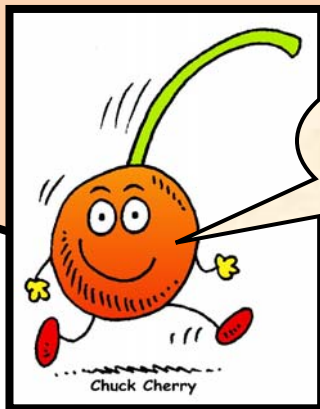
To solve equations, you must use the **INVERSE OPERATION**. That is, you can use division to undo multiplication and multiplication to undo division.

Example:  $5 \times 3 = 15$

$$15 \div 3 = 5$$

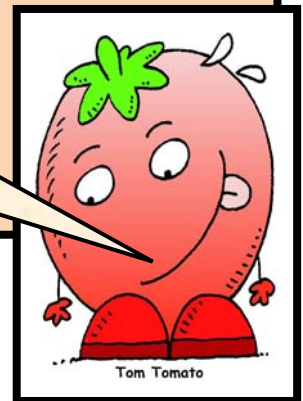
$$14 \div 2 = 7$$

$$7 \times 2 = 14$$



Are you my mother?

Do I look like a fruit to you?!



To solve the equation you must follow **3** steps:

1. Write the equation

$$2w = 10$$

2. Use the *inverse operation*  
on both sides

$$\frac{2w}{2} = \frac{10}{2}$$

3. Do the Math, show the math!

$$w = 5$$

$$10 \div 2 = 5$$



***Additional Example:***

1. Write the equation

$$\frac{a}{3} = 3$$

2. Use the **inverse operation**  
on both sides

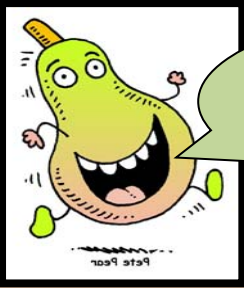
$$\frac{a}{3} \cdot 3 = 3 \cdot 3$$

$$3 \times 3 = 9$$

3. Do the Math, show the math!

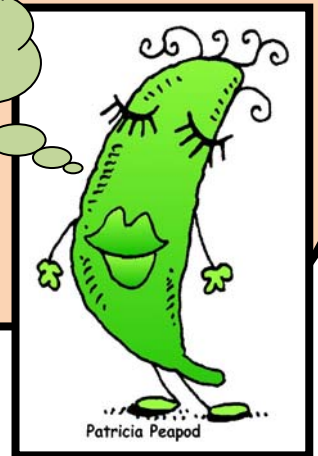
$$a = 9$$

$$9 \div 3 = 3$$



Has anyone seen  
a pear of peas?

My lips are  
sealed!



HOW come  
nobody like  
me??? Hee  
Hee

Quit staring at cool...



Kevin Kumara