Lesson 6-3A - Solving Systems using Elimination

Due Today: **p.284 #22**

22) 80 acres of flax; 160 acres of sunflowers

Due Wednesday: p.290 #1, 2, 4, 6, 7 (use elimination)

22. A farmer grows only sunflowers and flax on his 240-acre farm. This year he wants to plant 80 more acres of sunflowers than of flax. How many acres of each crop does the farmer need to plant?

Sunflower 

Flax 

S

F

$S + 80 = 240$

-80

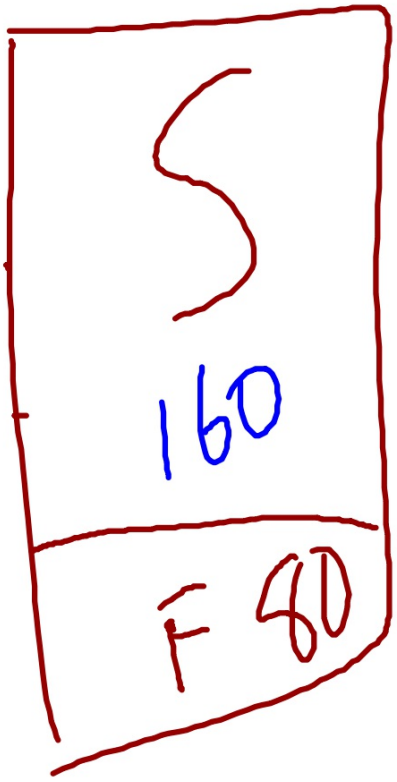
$S = F + 80$

$F + 80 + F = 240$

$2F + 80 = 240$

$2F = 160$

$F = 80$



Name:
Period:
Date:

1) Solve the system of equations using substitution.

$$3x + 2y = 17$$
$$x = y - 1$$

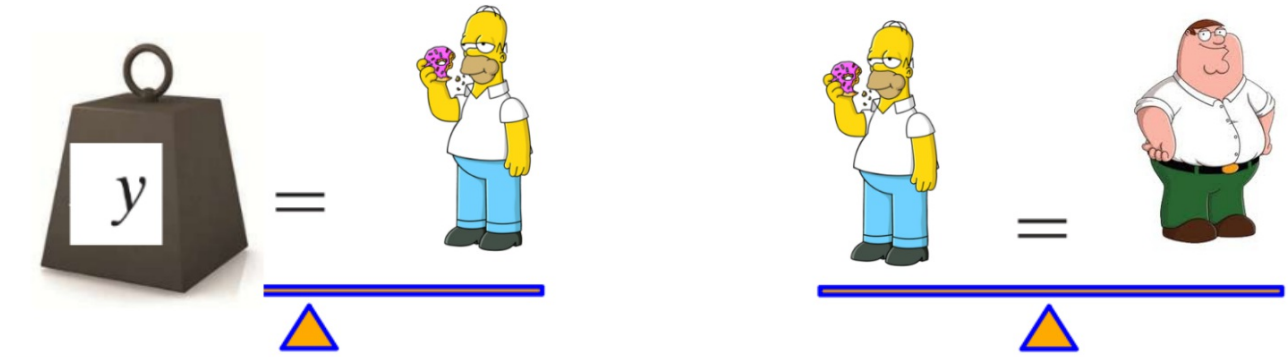
Solving Systems Using **Elimination**

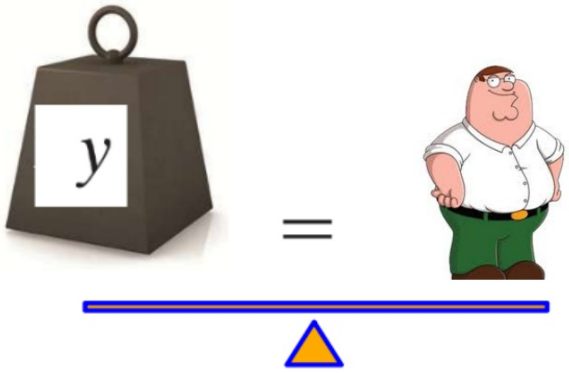
The sum of two numbers is 37.
The difference of the two numbers is 11.
What are the two numbers?

K	W	L
add to 37 difference of 11 First #= x Second #= y	The two numbers	x + y = 37 x − y = 11

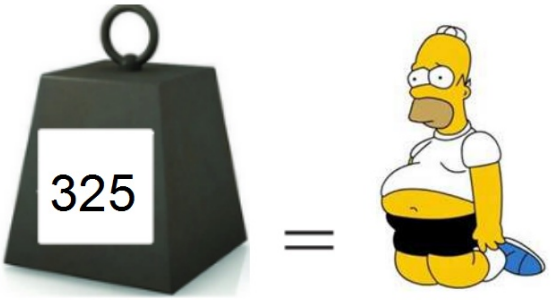
Solving Systems Using Substitution

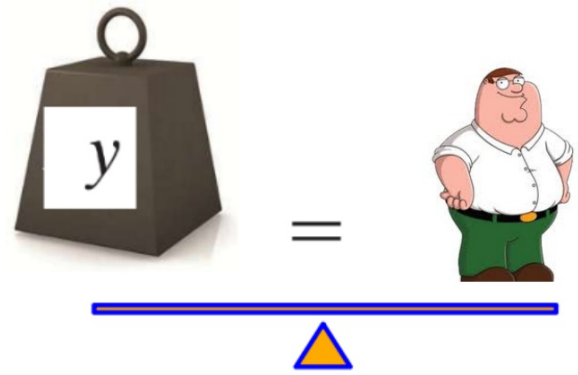
What can we conclude?



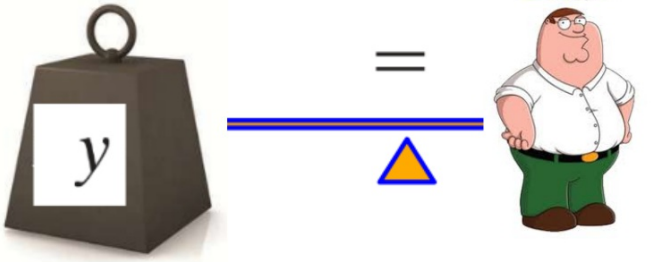


Solving Systems Using **Elimination**



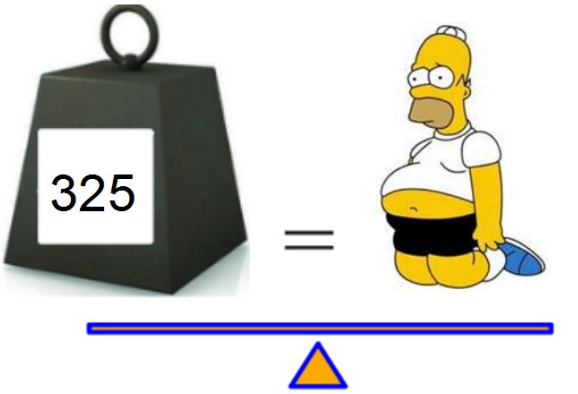


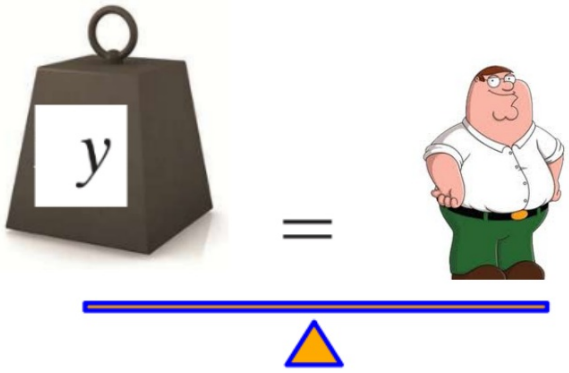
n we conclude?



Solving Systems Using **Elimination**

What can we conclude?





$$\begin{array}{r} x + y = 37 \\ +\ x - y = 11 \\ \hline 2x = 48 \end{array}$$

$x = 24$

I would eliminate ___ (x or y),
because the coefficients ___ and ___
are a zero pair.

$$2x + 5y = 17$$
$$+\ 6x - 5y = -9$$

$8x = 8$

$x = 1$

$2(1) + 5y = 17$

$-2 \quad -2$

$5y = 15$

$y = 3$

$(1, 3)$?

$-y = 11$

$x + y = 19$ 20

$20x + 5y = 60$ $2y = 10$ $4x + 8y = 20$

Solve by elimination.

1. $2x + 5y = 17$
$6x - 5y = -9$

2. $7x + 2y = 10$
$-7x + y = -16$

3. $2x - 3y = 61$
$2x + y = -7$

4. $8x + 11y = 20$
$5x - 11y = -59$

5. $2x + 18y = -9$
$4x + 18y = -27$

6. $20x + 3y = 20$
$-20x + 5y = 60$