Notes
Algebra Sections 7.3-7.4
Pages 444-457

Goal: "You will solve linear systems using elimination."

Now you will be able to solve an equation by <u>ELIMINATING</u> a variable!!

Ex: $2x + 3y = 11$
$\quad -2x + 5y = 13$

Ex: $4x + 3y = 2$
$\quad 5x - 3y = -2$

Ex: $3x + 4y = 8$
$\quad -3x + 5y = 10$

Ex: $5x - 6y = 4$
$\quad 7x + 6y = 8$

Ex: $8x - 4y = -4$
$\quad 4y = 3x + 14$

Ex: $9x - 3y = 18$
$\quad 3y = -7x + 30$

7.4: Solve Systems of Equations by Multiplying

Goals: *Find the solution to a system of equations by eliminating a variable using multiplication

*Can you add these equations as they are written and still eliminate one of the variables?

$5x + 2y = 16$
$3x - 4y = 20$

*Could you manipulate either equation so you COULD eliminate a variable?

Ex: $6x + 5y = 19$
     $2x + 3y = 5$

Ex: $2x + y = -9$
     $4x + 11y = 9$

Ex: $4x + 5y = 35$
     $3x - 2y = 9$

Ex: $3x - 7y = 5$
     $9y = 5x + 5$

Ex: $2x - 3y = 6$
     $4y = -7x - 8$

Ex: During a kayaking trip a kayaker travels 12 miles upstream (against the current) and 12 miles downstream (with the current). It took 3 hours to go upstream and 2 hours to go downstream. The speed of the current stayed the same throughout the trip. Find the average speed of the kayaker and the average speed of the current.

Ex: A riverboat travels 28 miles upstream in 7 hours. It travels 28 miles downstream in 5 hours. Find the average speed of the riverboat and the current.