

## Math 10: Unit 7.3 (CHP 7.2) Solving Linear Systems of Equations by Elimination

A) Why solving by *elimination* when we can solve it by *substitution*?  
-can be faster and easier

B) How to do it?

$$\begin{array}{l} \text{Ex: } 3x+y=6 \\ \quad 2x-y=4 \end{array}$$

ii) what if there is no coefficient = 1?

$$\begin{array}{l} \text{Ex: } 3x+2y=6 \\ \quad 2x-2y=4 \end{array}$$

$$\begin{array}{l} \text{Ex: } 3x+2y=6 \\ \quad 2x-3y=4 \end{array}$$

C) What if there are fractions?

-multiply by LCD to get rid of the fractions...then same steps as before

$$\text{Ex: } \frac{1}{3}x + \frac{1}{2}y = 6$$

$$\frac{1}{2}x - \frac{1}{3}y = 4$$

D) Always want: 1 variable to be positive  
1 variable to be negative

$$\text{Ex: } \begin{aligned} 3x+2y=6 \\ 2x+2y=4 \end{aligned}$$

$$\text{Ex: } \begin{aligned} 3x-2y=6 \\ 2x-2y=4 \end{aligned}$$

$$\begin{array}{l} \text{Ex: } 3x+2y=6 \\ \quad 5x+3y=4 \end{array}$$

-pg 295 #2: any 15 questions

