Linear Systems: ELIMINATION METHOD Guided Notes

Steps for solving systems using ELIMINATION.

- STEP 1: Line up the x's and y's.
- STEP 2: Look to see if one variable has opposite coefficients.
 - Yes, move to Step 3.
 - No, multiply one or both equations by a constant (LCM) in order to make the coefficients of the x or y terms <u>opposites</u>.
- STEP 3: Add the equations together to eliminate one of the variables.
- STEP 4: Solve for the remaining variable.
- STEP 5: Substitute the value you found into one of the original equations to solve for the other variable.
- STEP 6: Write your answer as an ordered pair.

Example 1:

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۲	STEP 1: Line up the x's and y's.	• STEP 1:	2x + 5y = 17
$oldsymbol{O}$	STEP 2: Look to see if one variable	\odot STEP 2:	
	has opposite coefficients.	o <mark>Yes</mark>	6x - 5y = -9
	• Yes, move to Step 3.	• STEP 3:	8x = 8
	● No,	(y cancels)	8 8
$oldsymbol{O}$	STEP 3: Add the equations together	• STEP 4:	x = 1
	to eliminate one of the variables.		
$oldsymbol{O}$	STEP 4: Solve for the remaining	• STEP 5: 2	(1) + 5y = 17
	variable.	2 + 5y = 17	
$oldsymbol{O}$	STEP 5: Substitute the value you	- 2	-2
	found into one of the original		$\frac{-2}{5v = 15}$
	equations to solve for the other		$\frac{55-15}{5}$
	variable.		$\frac{3}{2}$ $\frac{3}{2}$
۲	STEP 6: Write your answer as an	• STEP 6: (1,	y - 5 3)
	ordered pair.	(-)	,