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 opposites.
- 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:

⦿ 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, ⦿ 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.	⦿ STEP 1: $2x+5y=17$ ⦿ STEP 2: o Yes $6x-5y=-9$ ⦿ STEP 3: $8x = 8$ (y cancels) $\frac{8x}{8} = \frac{8}{8}$ ⦿ STEP 4: x = 1 ⦿ STEP 5: 2(1) + 5y = 17 2 + 5y = 17 - 2 -2 5y = 15 $\frac{5y}{5} = \frac{15}{5}$ y = 3 ⦿ STEP 6: (1, 3)