

Notes #5 ~ Sect. 7.2: Solving Systems by Substitution

To solve a system using substitution:

Step 1 : Solve one of the equations for either x or y . (Choose the variable that has a coefficient of 1 or -1 .)

Step 2 : Circle what the variable you solved for equals. Also circle that variable in the other equation.

Step 3 : Write a new equation by substituting the circled parts for each other.

Step 4 : Solve for the variable that is left in the new equation.

Step 5 : Plug this answer into one of the original equations and solve for the other variable.

Step 6 : Write your solution as an ordered pair.

Step 7 : Check your solution.

Ex. 1: Solve the system using substitution. Check your answer.

$$y = 2x + 2$$

$$y = -3x + 4$$

Ex. 2: Solve the system using substitution. Check your answer.

$$y = 2x - 1$$

$$y = x + 5$$

Ex. 3: Solve the system using substitution. Check your answer.

$$y = 2x$$

$$7x - y = 15$$

Ex. 4: Solve the system using substitution. Check your answer.

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

$$4x + 2y = 12$$

Ex. 5: Solve the system using substitution. Check your answer.

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

$$2x + 3y = -6$$

Ex. 6: Solve the system using substitution. Check your answer.

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

$$4x + 6y = 6$$