Lesson 4 – Solve Systems with Elimination

Steps

1. Arrange the equations with like terms in columns.
2. Make the coefficients of *x* or *y* the same by multiplying each term of one or both equations by an appropriate number.
3. Add or subtract the equations and solve for the remaining variable.
4. Substitute the value obtained in Step 3 into either of the original equations and solve for the other variable.
5. Check the solution in each of the original equations.

Example: Solve using Elimination

$$x + 2y = 10$$
$$-2x + 3y = 15$$

Step 1: Multiply the first equation by 2.

Step 2: Add the two equations

Step 3: Substitute *y* = 5 into one of the two equations and solve for x.

Example 2: Solve using Elimination

$2y + 4x = 1$
$3y + 3x = 3$

Example 3: Parallel Lines

$y = 2.5x - 3$
$2y = 5x + 4$

Example 4

$2y = 6x + 4$
$y = 3x + 2$

Assignment: Pg. 437; 3, 7, 10, 20