

Math 1090 ~ Business Algebra

Section 1.4 Systems of Linear Equations

Objectives:

- Solve a system of linear equations to find the intersection point.
- Determine if there are no solutions, one solution, or many solutions to a system of linear equations.

$\underline{Vocabulary}$

System of linear equations

Solution

Methods

Substitution

Elimination

Ex 1: Solve
$$3(2x+3y) = -x+y$$

 $x+5=2-5y$

Ex 2: Solve
$$x = -3$$

 $y = 1$

Ex 3: Solve
$$x - \frac{3}{4}y = -9$$

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

Ex 4: Solve
$$3x+15y=-5$$

 $-x-5y=2$

Ex 5: Solve
$$3x + 4y = 31$$

 $-2x + y = 5$

Ex 6: Solve
$$5z = 15$$

 $x - 2y + 3z = 17$
 $2x + 3y + z = 12$

Ex 7: Jack's basketball team scored 41 less than two times the number of points that Dylan's team scored. The sum of both teams' final points was 106. How many points did each team score?