

## 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.


## Vocabulary

System of linear equations

Solution

Methods
Substitution

Elimination

$$
\begin{aligned}
\text { Ex 1: Solve } & 3(2 x+3 y)=-x+y \\
& x+5=2-5 y
\end{aligned}
$$

$$
\text { Ex 2: Solve } \begin{array}{ll}
x=-3 \\
& y=1
\end{array}
$$

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

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

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

$$
-x-5 y=2
$$

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

$$
-2 x+y=5
$$

$$
\begin{array}{ll}
\text { Ex 6: Solve } & 5 z=15 \\
& x-2 y+3 z=17
\end{array}
$$

$2 x+3 y+z=12$

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?

