

Linear Systems

Key Ideas:

1. Types of Systems

- independent (different slopes, one solution – a point)
- inconsistent (same slope, no solution)
- dependent (same slope and y -intercept, infinite solutions)

2. Solving Systems

- graphing
- substitution strategy (isolate a variable)
- elimination strategy (cancel out one of the variables)

3. Word Problems

- write 2 equations (system) and solve

***Note: Watch your positive and negative signs!!**

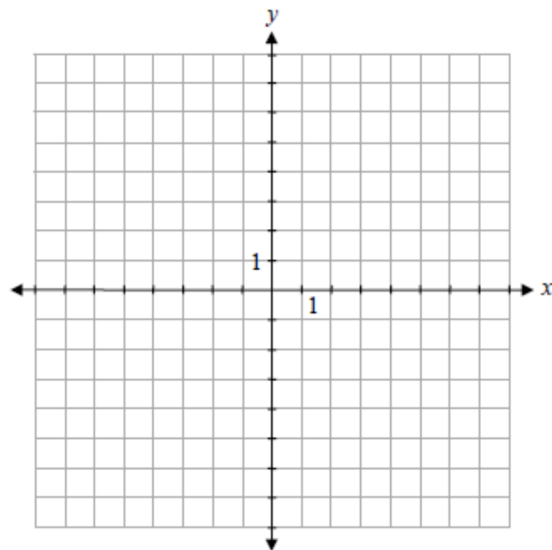
1. Solve and state the ***type of system***.

$$x + y = 3$$

$$-2x - y = 2$$

2. Solve, by **graphing**.

$$\begin{aligned}x + 4y &= 4 \\ -2x + y &= 10\end{aligned}$$



3. Solve, by **substitution**.

$$\begin{aligned}2x + 3y &= 11 \\ 4x - y &= -13\end{aligned}$$

4. Solve, by **elimination**.

$$\begin{aligned}2x + 3y &= 6 \\ 5x + 10y &= 20\end{aligned}$$

- Edward has a jar containing **nickels** and **dimes**. The **total number** of coins is 300, and their **value** is \$23.25. Determine how many of each coin is in the jar.