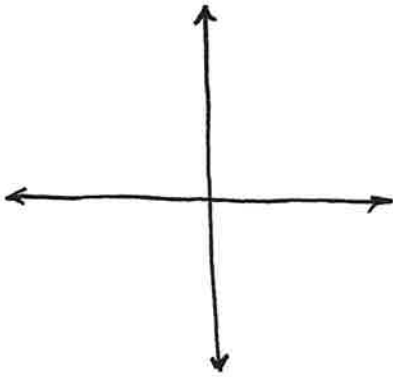


MATH 1314

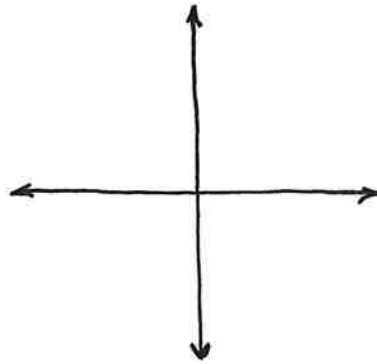
Chapter 9.1: Systems of Linear Equations
in Two Variables and Applications

SYSTEM OF LINEAR EQUATIONS

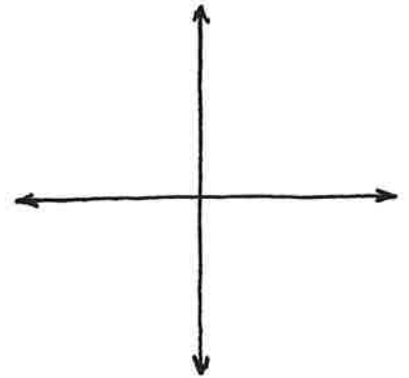
1 SOLUTION



NO SOLUTION



INFINITELY MANY SOLUTIONS



DETERMINE IF THE ORDERED PAIR IS A SOLUTION TO THE SYSTEM.

$$\begin{aligned} 6x + y &= -2 \\ 4x - 3y &= 17 \end{aligned}$$

$$\left(\frac{1}{2}, -5\right)$$

$$(0, -2)$$

Solve by substitution.

$$-5x - 4y = 2$$

$$4x + y = 5$$

Solve by elimination.

$$5x - 4y = 6$$

$$-3x + 7y = 1$$

Solve.

$$2x + y = 4$$

$$6x + 3y = 6$$

Solve.

$$y = 2x - 1$$

$$8x - 4y = 4$$

How many ounces of a 20% acid solution and a 35% acid solution should be mixed to produce 15 ounces of a 30% acid solution?

A riverboat traveling against the current takes 3 hours to travel 24 miles. The return trip with the current takes 2 hours. Find the rate of the boat in still water and the rate of the current.