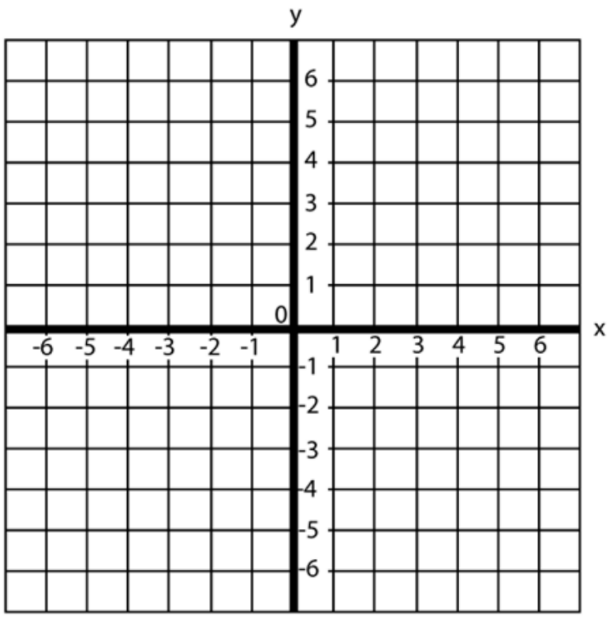
Write each linear equation in slope-intercept form:

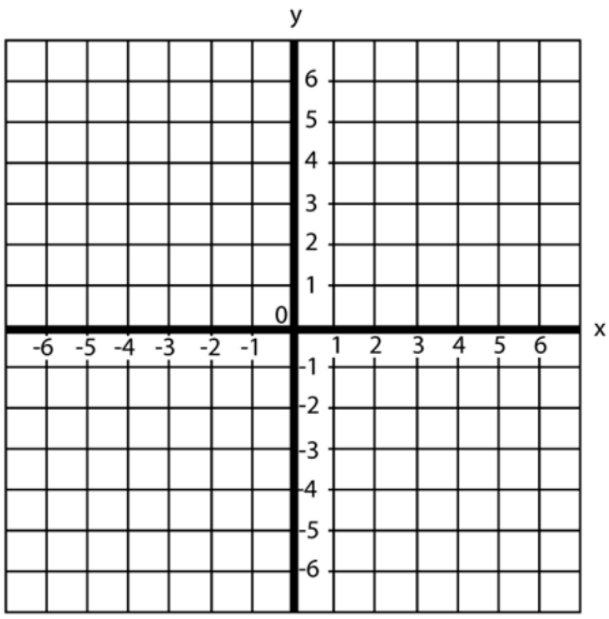
$3x - y = 5$ $y + x = 2$

Graph each linear equation by hand.

WARM UP



Rise: Run:
y-intercept:



Rise: Run:
y-intercept:

WARM UP

A system of linear equations is a set of two or more linear equations containing two or more variables.

A solution of a system of linear equations with two variables is an ordered pair that satisfies each equation in the system.

If (3, 1) is a soluiton to the system $\begin{cases} y = 2x - 5 \\ y = -x + 4 \end{cases}$

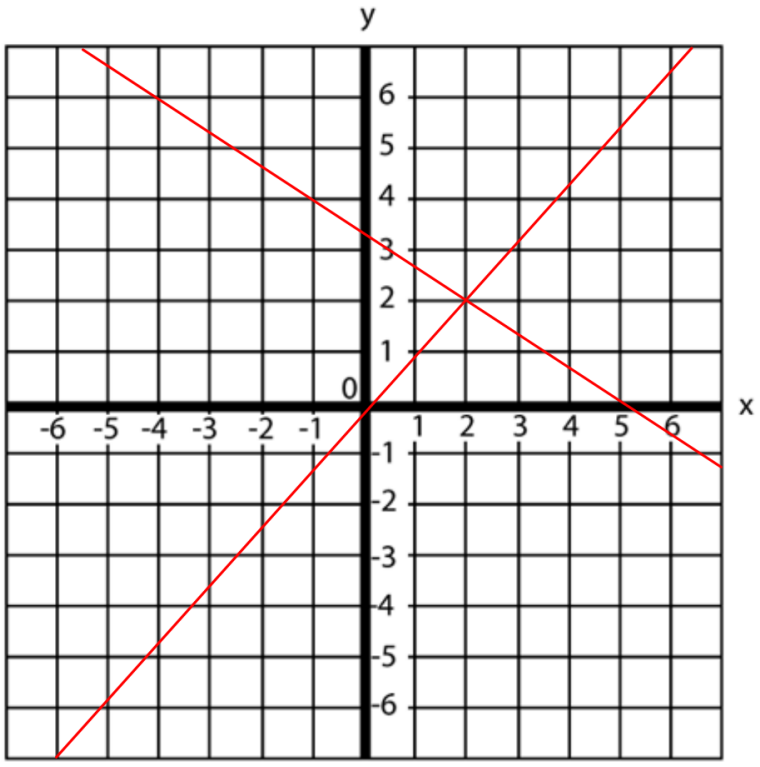
then (3, 1) will make both equations _____.

Tell whether the ordered pair is a solution of the given system.

Ex 1. Is (1, 9) a solution to the system $\begin{cases} x + y = 10 \\ 3x + y = 12 \end{cases}$

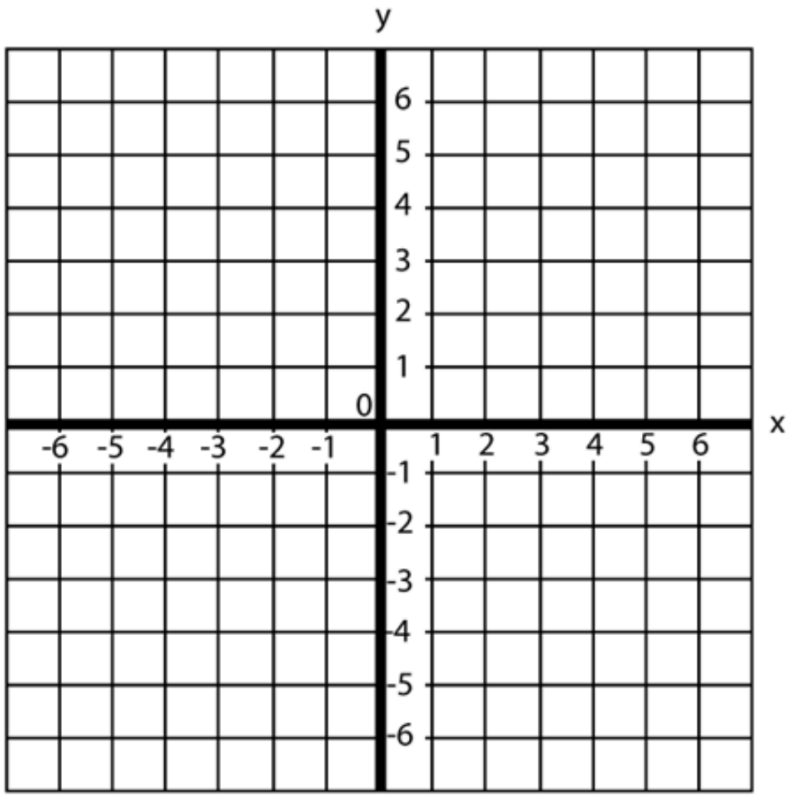
Ex 2. Is (2, -3) a solution to the system $\begin{cases} x + y = 5 \\ 2x + 5y = -11 \end{cases}$

Ex 3. What is the solution of the system of equations graphed below?



Ex 4. Solve the system by graphing.

$$\begin{cases} y = x - 6 \\ y = -x \end{cases}$$

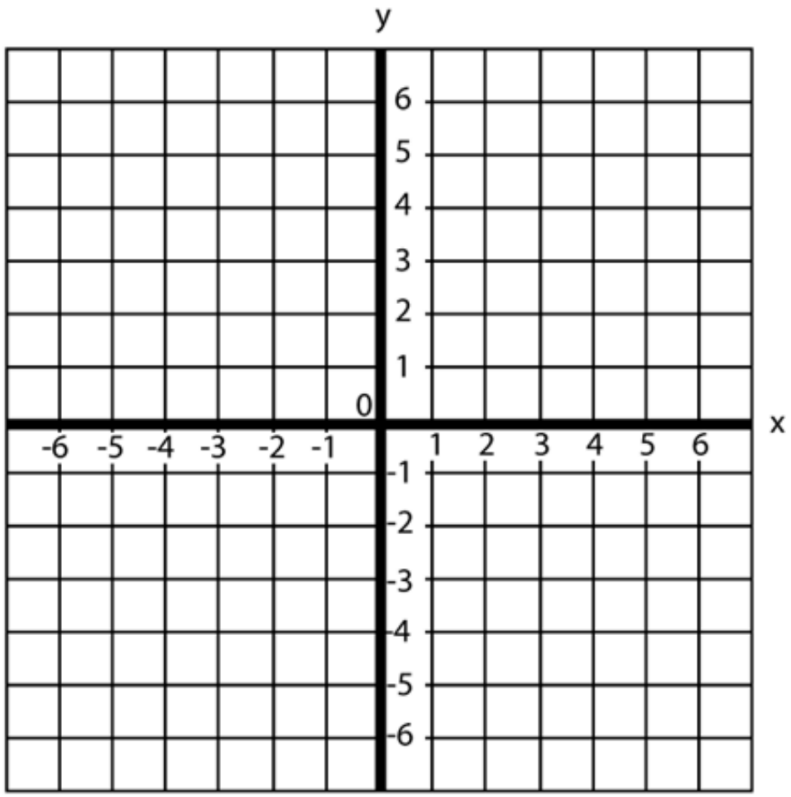


Verify:

Ex 5. Solve the system by graphing.

$$\begin{cases} y = x - 2 \\ 2x + y = 1 \end{cases}$$

Verify:



The Warrior Baseball Team is selling hats as a fund-raiser.
They contacted two companies.

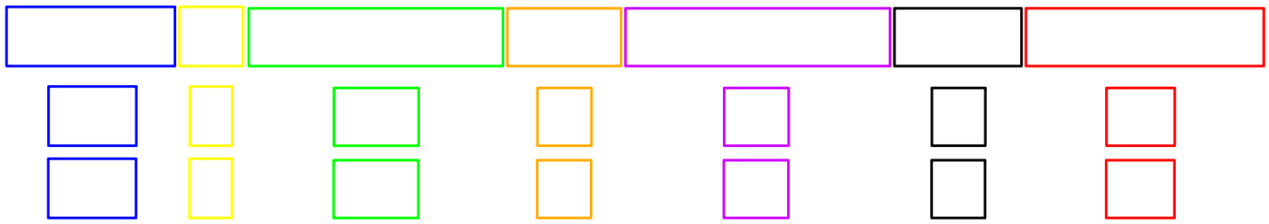
Hats Off charges a $20 design fee plus $5 per hat.
Top Stuff charges a $15 design fee plus $6 per hat.

For how many hats will the cost be the same? What is that Cost?

Understand the Problem

	Hats Off	**Top Stuff**
Hat price		
Design fee		

Make a Plan



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Solve

$$y = 5x + 20$$
$$y = 6x + 15$$

The graphs intersect at (,)

Look Back

Check point (5, 45) using both equations.

Cost of purchasing 5 hats from Hats Off

$5(5) + $20 = _____

Cost of purchasing 5 hats from Top Stuff

$6(5) + $15 = _____

The Warrior Baseball Team is selling hats as a fund-raiser.
They contacted two companies.

Hats Off charges a $20 design fee plus $5 per hat.
Top Stuff charges a $15 design fee plus $6 per hat.

For how many hats will the cost be the same?

5 hats

What is that Cost?

$45

When is it cheaper for the baseball team to use Top Stuff and when is it cheaper to use Hats Off?

Solve by Graphing

$$\begin{cases} x = 2y - 4 \\ x + 8y = 16 \end{cases}$$

EXIT TICKET