Warm Up

Tell whether the ordered pair is a solution to the equation.

1. $(4, 4); y = -x + 8$

2. $(-2, 3); y = -2x - 1$

3. $(3, 2); x + 6y = 13$

4. $(1, 3) = 4x - 3y = -5$

5. $(-1, -2); y = 3x$

6. $(-3, 9); y = -3x$

7. $(0, -1); y = 4x - 1$

8. $(-2, 8); y = -2x - 1$

Essential Question

How can you use a graph to illustrate the solution to a system of linear equations?

Goal: "I can. . .

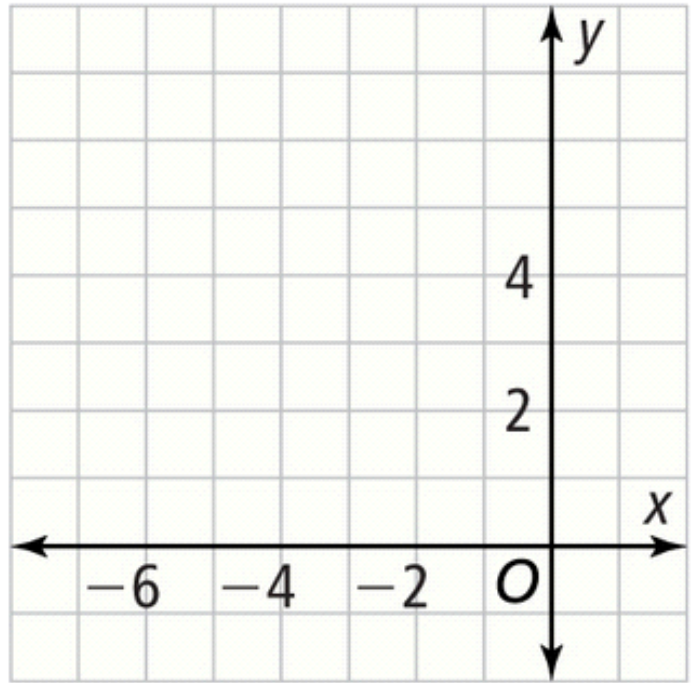**Use graphs to find approximate solutions to systems of equations."**

Example 1

Graph the following equations on the same graph and see at what point the two lines intersect.
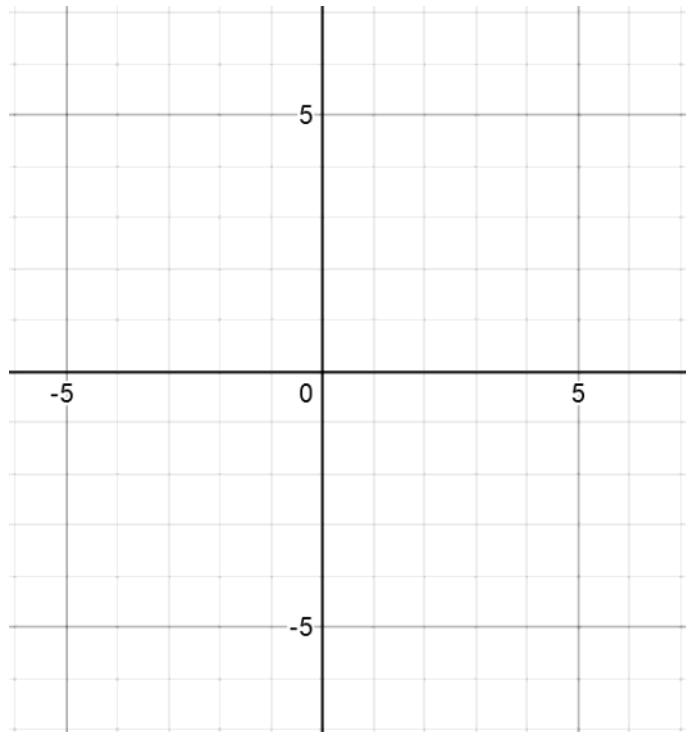
lines intersect.

$$y = -2x - 4$$

$$y = 0.5x + 6$$

Find the solution to the following system of equations.

a. $y = \frac{1}{2}x - 2$
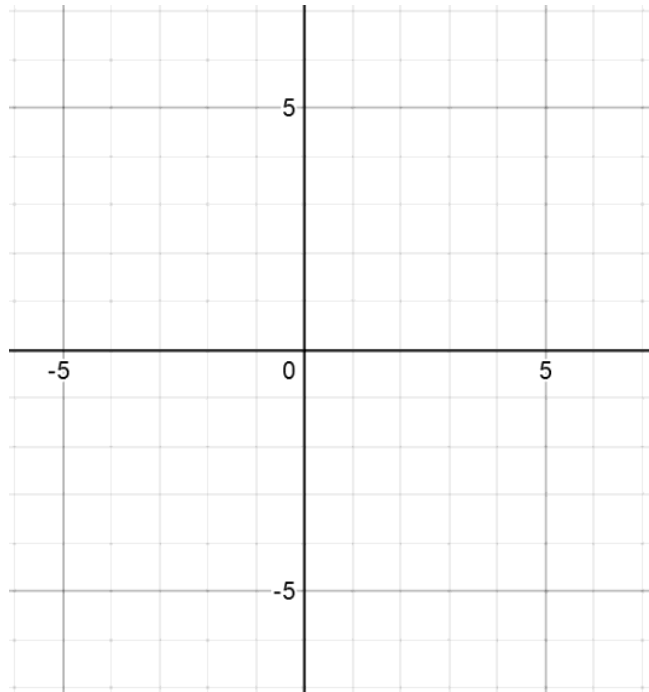
$y = 3x - 7$

b. $y = 2x + 10$

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

Find the solution to the following system of equations.
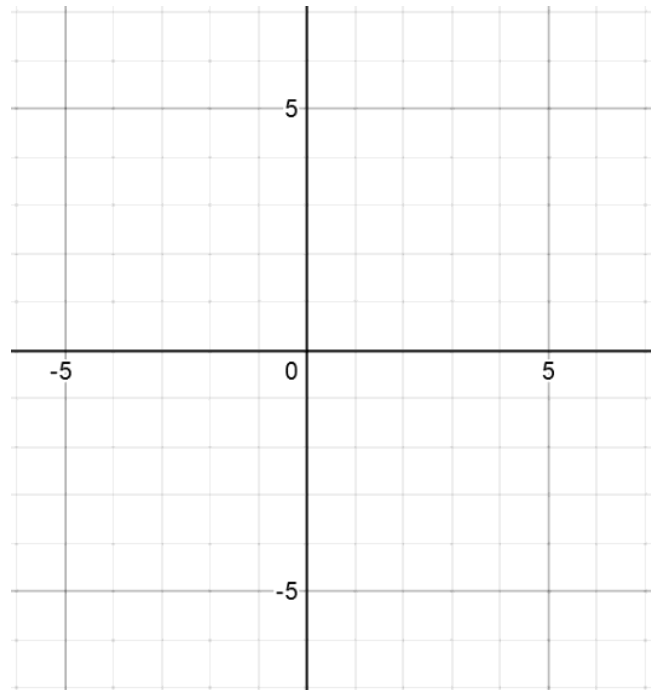
$$15x + 5y = 25$$

$$y = 5 - 3x$$

Find the solution to the following system of equations.
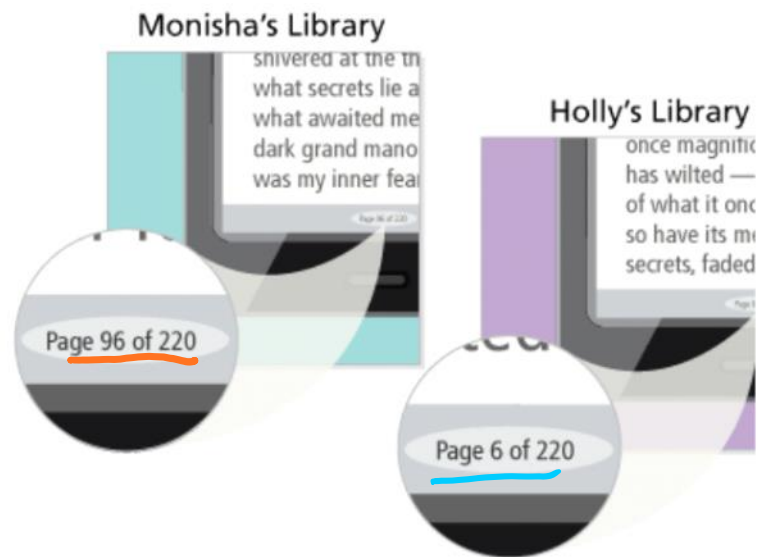
$$y - 2x = 6$$

$$-4x + 2y = 8$$

Monisha and Holly have 14 more days to finish reading the same novel for class. Monisha plans to read 9 pages each day, while Holly plans to read 20 pages each day. Assuming Holly and Monisha both maintain their readying plan, when will Holly catch up with Monisha? Who will finish reading the novel first?
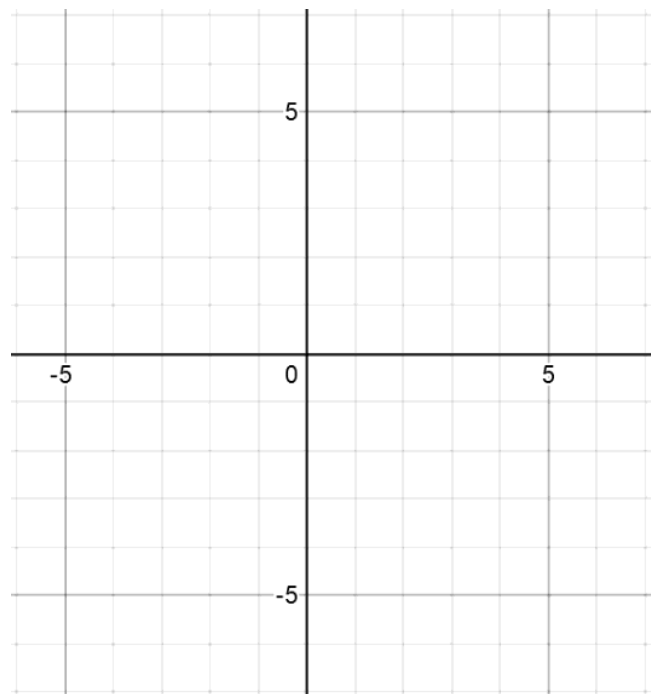
Monisha's Library

plan, when will Holly catch up with Monisha? Who will finish reading the novel first?

Monisha's Library

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Holly's Library

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Find the solution to the following system of equations.

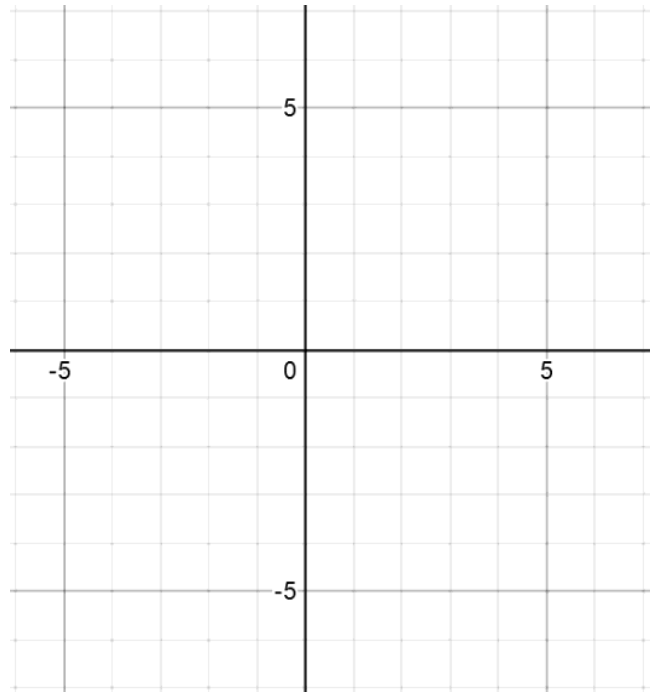$$y = 2x - 3$$

$$y = -5x + 6$$

Find the solution to the following system of equations.

$$y = 5x - 4$$

$$y = -6x + 14$$

Ending Questions

If equations are parallel, what is the same about them?

When will a system of equations have no answer?

When will a system of equations have INFINITE answers?

When will a system of equations require an approximation for an answer?

HOMEWORK

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