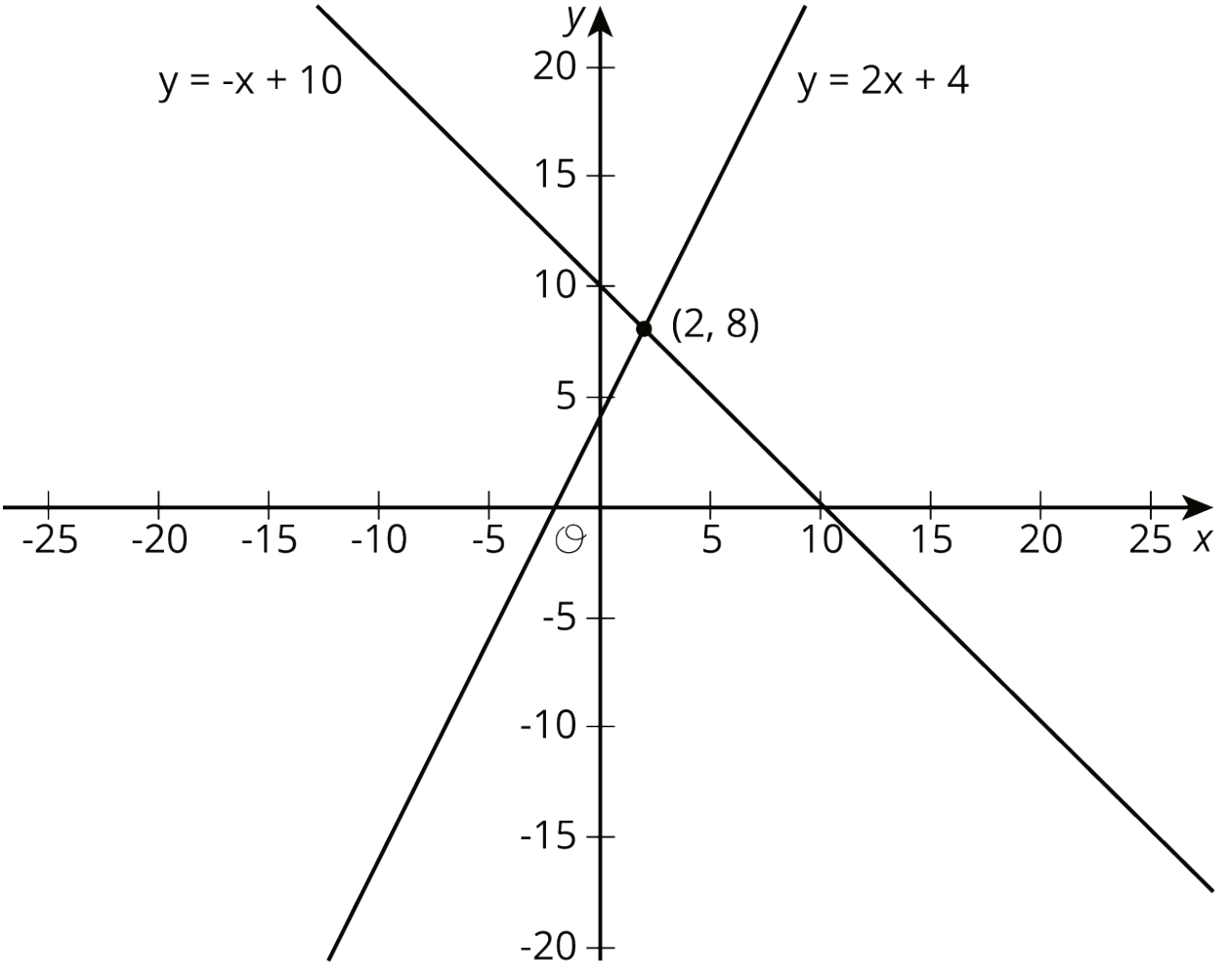
Unit 4 Lesson 13: Solving Systems of Equations

1 True or False: Two Lines (Warm up)

Student Task Statement



Use the lines to decide whether each statement is true or false. Be prepared to explain your reasoning using the lines.

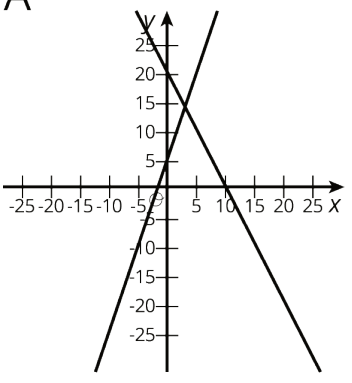
1. A solution to $8 = -x + 10$ is 2.
2. A solution to $2 = 2x + 4$ is 8.
3. A solution to $-x + 10 = 2x + 4$ is 8.
4. A solution to $-x + 10 = 2x + 4$ is 2.
5. There are no values of x and y that make $y = -x + 10$ and $y = 2x + 4$ true at the same time.

2 Matching Graphs to Systems

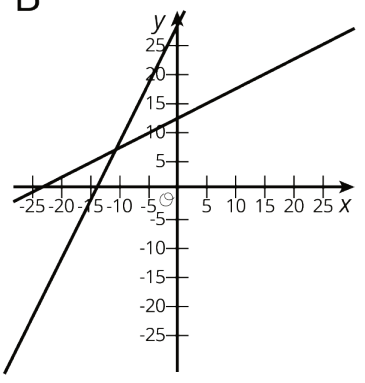
Student Task Statement

Here are three **systems of equations** graphed on a coordinate plane:

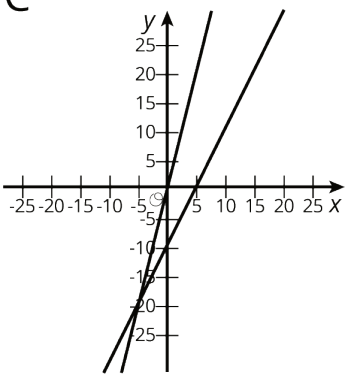
A



B



C



1. Match each figure to one of the systems of equations shown here.
   a. $\begin{cases} y = 3x + 5 \\ y = -2x + 20 \end{cases}$

   b. $\begin{cases} y = 2x - 10 \\ y = 4x - 1 \end{cases}$

   c. $\begin{cases} y = 0.5x + 12 \\ y = 2x + 27 \end{cases}$

2. Find the solution to each system and check that your solution is reasonable based on the graph.

3 Different Types of Systems

Student Task Statement

Your teacher will give you a page with some systems of equations.

1. Graph each system of equations carefully on the provided coordinate plane.
2. Describe what the graph of a system of equations looks like when it has . . .
    a. 1 solution

    b. 0 solutions

    c. infinitely many solutions