

Solving Systems by Equivalent Forms Method

Decide whether it is easier to write each equation in equivalent $y = mx + b$ form or equivalent $x = ky + c$ form. Then, write each equation in the form you chose.

1. $x + y = 3$
2. $x - y = -5$
3. $2x + y = -1$
4. $x - 2y = 8$
5. $9x + 6y = 12$
6. $-x + 4y = 10$
7. In parts (1)–(6), how did you decide which form to use?

Solve each system by writing the equations in $y = mx + b$ or $x = ky + c$ form and then using the Equivalent Forms method.

1.
$$\begin{cases} x + y = 3 \\ x - y = -5 \end{cases}$$

2.
$$\begin{cases} 3x - y = 30 \\ x + y = 14 \end{cases}$$

3.
$$\begin{cases} x + 6y = 15 \\ -x + 4y = 5 \end{cases}$$

4.
$$\begin{cases} x - y = -5 \\ -2x + 2y = 10 \end{cases}$$

8. What do you notice about the systems that makes this method a good one to use?
9. Describe the steps needed in using this method to solve a system.
10. What does it mean for two equations to be equivalent?
11. What does it mean to solve a linear system?