

SC Algebra 1
7.4 Solving Systems by Elimination (Day Two)

Example 1:

Use Elimination to solve each system of equations.

$$\begin{aligned}10x + 5y &= 30 \\ 5x - 3y &= -7\end{aligned}$$

$$\begin{aligned}9x + 2y &= 23 \\ 3x + 3y &= 3\end{aligned}$$

$$\begin{aligned}18x - 6y &= 30 \\ -9x - y &= -19\end{aligned}$$

$$\begin{aligned}10x + 12y &= -26 \\ -6x + 6y &= -24\end{aligned}$$

Example 2:

$$\begin{aligned}3x + 4y &= -22 \\ -2x + 3y &= -8\end{aligned}$$

$$\begin{aligned}5x - 6y &= 1 \\ -7x + 5y &= 5\end{aligned}$$

3 Ways to Solve Systems

1)

2)

3)

Example 3: Writing and Solving Systems

- A) Jorge's comic book collection consists of single issues that cost \$4 each and paperback collections that cost \$12 each. He has 100 books in all. His collection cost him \$616. Write and solve a system of equations to determine how many single issues and paperbacks Jorge has in his collection.
- B) Breanna and Paul record episodes for their Web series during the weekend. They record full-length episodes that are about 20 minutes long and mini-episodes that are 3 minutes long. In total, they recorded 19 episodes, and the total time of their recordings is exactly 295 minutes. Write and solve a system of equations to determine how many full-length episodes and how many mini-episodes Breanna and Paul record during the weekend