

Review Systems of Equations

Practice 2.2.1: Proving Equivalencies

Find the solution to each of the following systems by using the substitution method.

1.
$$\begin{cases} y+3=x \\ 3x+4y=16 \end{cases}$$

2. Antony works at a local clothing store. He can earn either \$600 per month plus a 5% commission or \$450 per month and a 7% commission. Write and solve a system of equations that you could use to determine the amount of merchandise that Antony would need to sell in order to earn the same amount of money for each pay scale.

Find the solution to each of the following systems by using the elimination method.

3.
$$\begin{cases} 5x-2y=-13 \\ 2x+y=11 \end{cases}$$

4. At an Italian bistro, the cost of 2 plates of spaghetti and 1 salad is \$27.50. The cost for 4 plates of spaghetti and 3 salads is \$59.50. Write and solve a system of equations to find the cost of 1 plate of spaghetti and 1 salad.

Choose an appropriate method to solve each system of equations, then find the solution.

5.
$$\begin{cases} 3x-3y=-6 \\ 2x-2y=-16 \end{cases}$$

6.
$$\begin{cases} 3x=4y \\ 4x-5y=2 \end{cases}$$

7. Write your own word problem that could be solved using a system of equations. Show the equations you would use to solve the word problem and the solution.

Extra Practice for Extra Credit

- Go to <https://www.IXL.com/signin/chattooga>
- Enter your username and password and click *Sign in*.
(Note: If the username and password are not listed below, they will be provided separately.)
Username _____ Password _____
- Click on *Math* at the top of the page. The following are items you should complete:
U.1, U.2, U.3, U.8, U.9, U.10, U.11