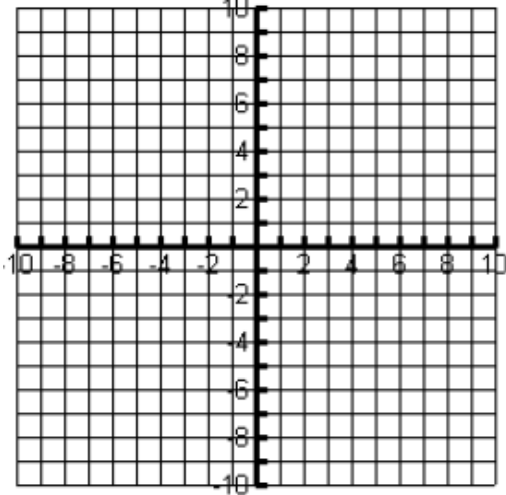


1-2 Homework

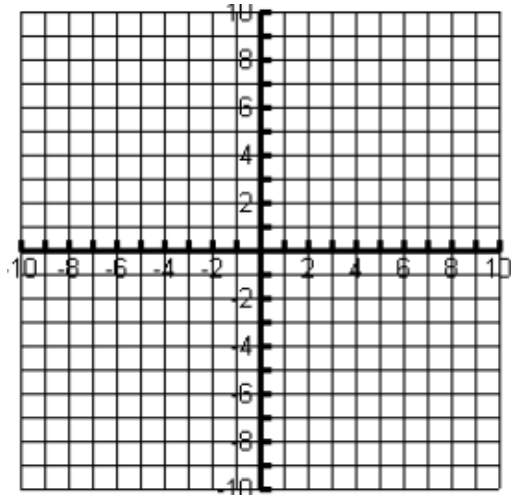
Systems of Equations with Context

Solve by Graphing.

$$\begin{aligned} 3x - 6y &= 12 \\ 2x - 4y &= 8 \end{aligned}$$



$$\begin{aligned} x + y &= 2 \\ y &= -2x - 1 \end{aligned}$$



Solve by Substitution.

$$\begin{aligned} 2x - 3y &= -1 \\ y &= x - 1 \end{aligned}$$

$$\begin{aligned} y &= -3x + 5 \\ 5x - 4y &= -3 \end{aligned}$$

Solve by Elimination.

$$\begin{aligned} 5x + y &= 9 \\ 10x - 7y &= -18 \end{aligned}$$

$$\begin{aligned} -3x + 7y &= -16 \\ -9x + 5y &= 16 \end{aligned}$$

For each question, define your variables, write a system of equations, and solve using any method. Please use a separate sheet of paper to show all work.

1. The length of a rectangle is 3 cm more than twice the width. The perimeter of the rectangle is 42 cm. Find the dimensions of the rectangle.
2. Suppose you have \$200 in your account and you save \$10 dollars each week. Your friend has \$110 in their account and starts saving \$15 each week. When will your account balances be the same?
3. The difference of two numbers is 40. Their sum is 66. Find the numbers.
4. A youth group and their leaders visited Mammoth Cave. Two adults and 5 students in one van paid \$77. Two adults and 7 students in another van paid \$95. Find the adult price and student price of the tour.
5. A winter clothing store had a sale and Cory bought two pairs of gloves and four hats for \$43. Mark bought two pairs of gloves and two hats for \$30. How much did each pair of gloves and each hat cost?
6. At a recreation and sports facility, 3 members and 3 nonmembers pay a total of \$180 to take a yoga class. A group of 5 members and 3 nonmembers pay \$210 to take the same class. How much does it cost each member and nonmember to take the yoga class?
7. Joey has \$5.75 made up of all dimes and quarters. If Joey has 38 coins, how many of each coin does he have?