

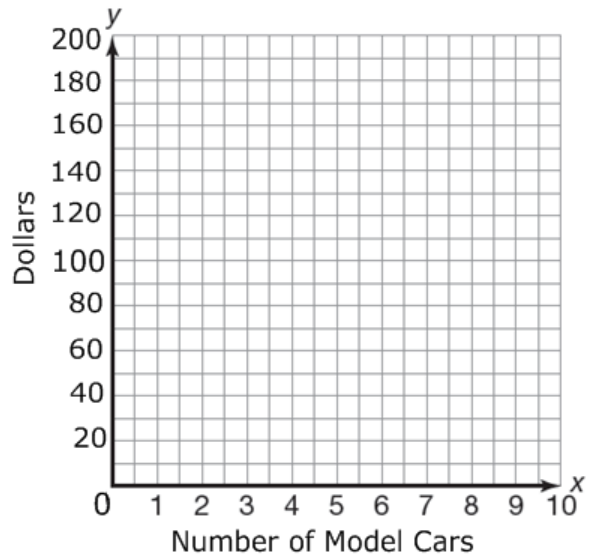
1. Eric sells model cars from a booth at a local flea market. He purchases each model car from a distributor for \$12, and the flea market charges him a booth fee of \$50. Eric sells each model car for \$20.

Income equation:

Expense equation:

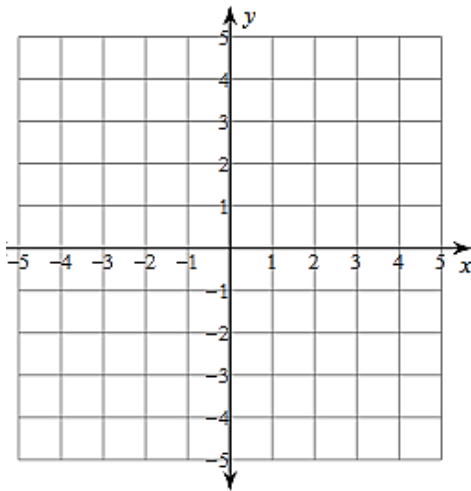
Break-even Point estimate:

Meaning:

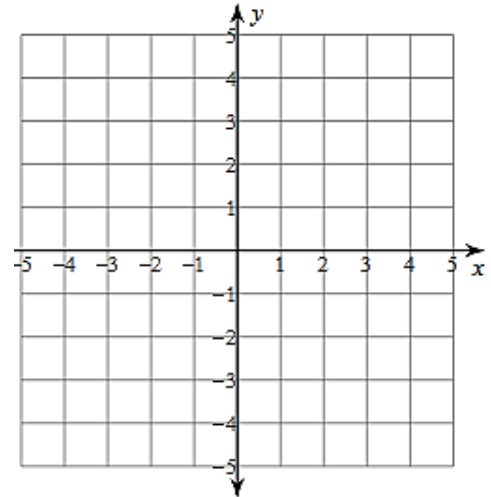


Solve each system by graphing.

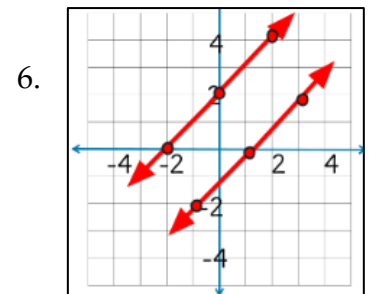
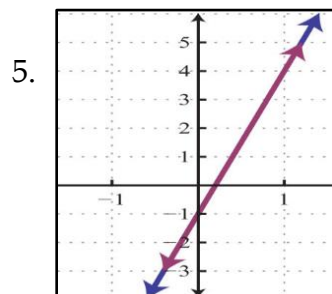
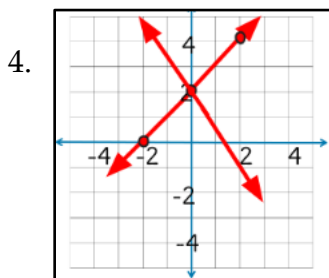
2.  $y = 3x - 3$   
 $y = 3x + 4$



3.  $y = 2x + 4$   
 $y = \frac{1}{3}x - 1$



Label each system of equations below as one solution, no solution, or infinite solutions AND consistent or inconsistent.



7. Workout Plus offers a membership for \$30 each month plus a \$100 start-up fee. Fit Works offers a membership for \$50 each month plus a \$20 start-up fee. After how many months will memberships to both gyms cost the same amount?

Write an equation for each situation. Then use substitution to solve.

**Solve each system using substitution.**

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

9. 
$$\begin{aligned} y &= -7x - 7 \\ y &= -6x - 5 \end{aligned}$$

10. 
$$\begin{aligned} -0.5x + 0.3y &= -0.7 \\ 0.1y &= 0.6x + 0.2 \end{aligned}$$

11. 
$$\begin{aligned} y &= -3x - 16 \\ -3x - y &= 16 \end{aligned}$$

12. 
$$\begin{aligned} 5x + y &= 1 \\ 15x + 3y &= -7 \end{aligned}$$

13. 
$$\begin{aligned} \frac{1}{2}x + \frac{3}{2}y &= 5 \\ \frac{1}{3}y &= 2x - 1 \end{aligned}$$