

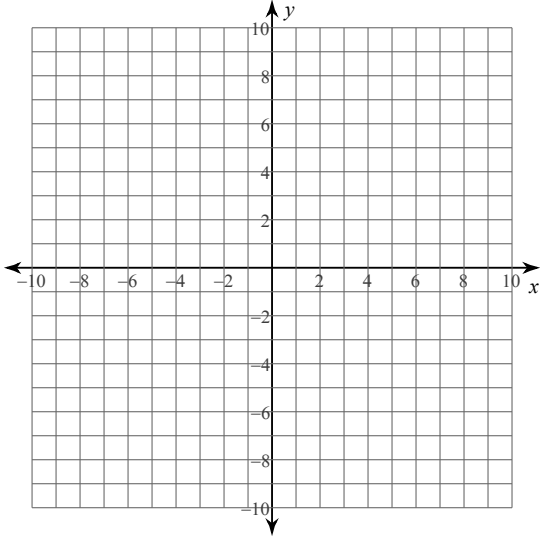
# Solving Systems of Equations - Graphing and Substitution

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**Solve each system by graphing.**

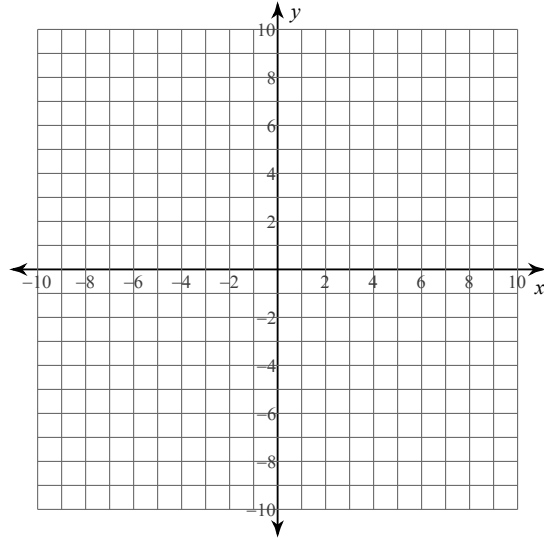
$$1) y = \frac{1}{2}x - 8$$

$$y = 7x + 5$$



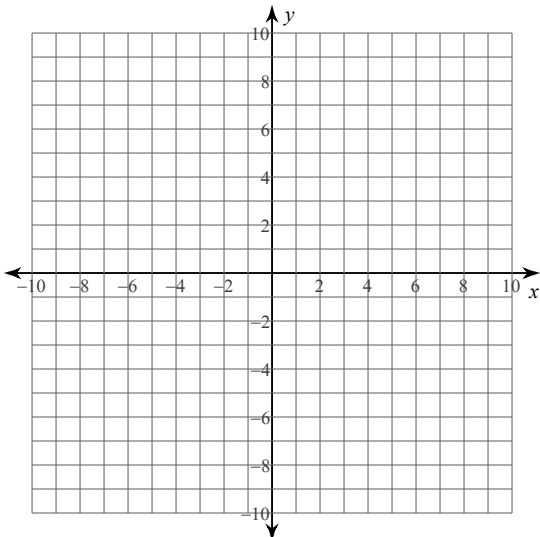
$$2) y = -\frac{3}{2}x - 1$$

$$y = \frac{1}{6}x + 9$$



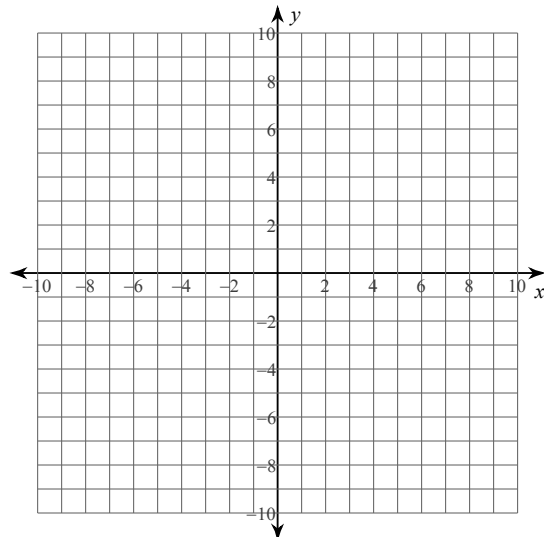
$$3) y = \frac{10}{9}x - 6$$

$$y = \frac{1}{9}x + 3$$

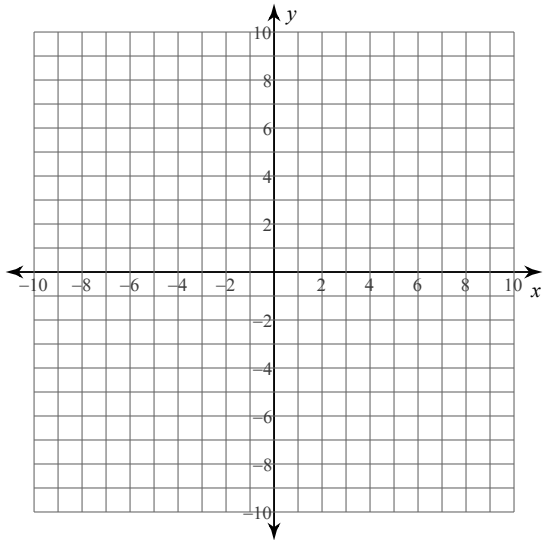


$$4) y = \frac{15}{4}x - 8$$

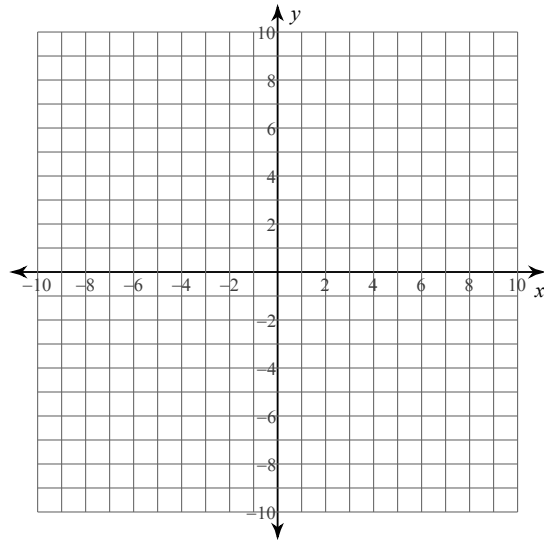
$$y = \frac{3}{4}x + 4$$



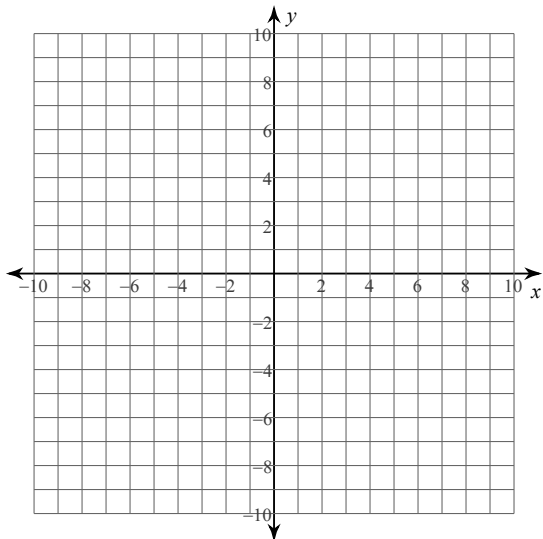
5)  $7x + 6y = -54$   
 $x - y = -4$



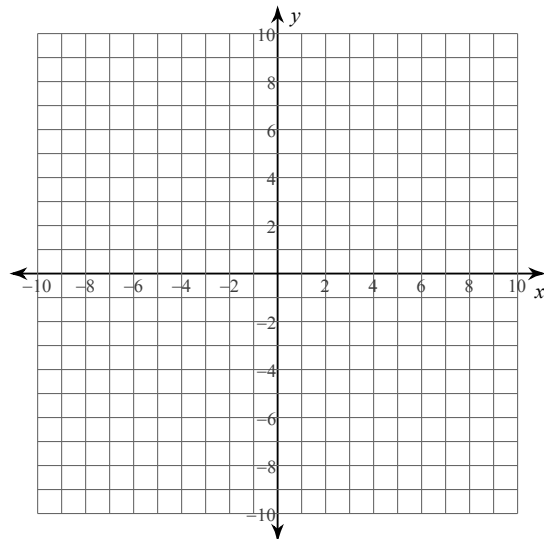
6)  $x + y = 8$   
 $4x - 7y = 21$



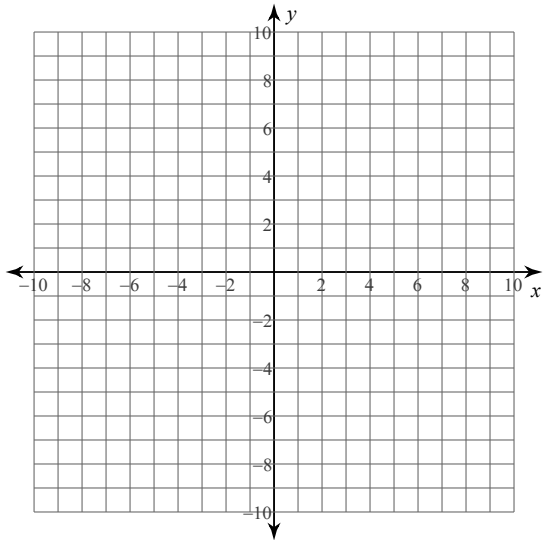
7)  $2x - 3y = 27$   
 $5x + 3y = 15$



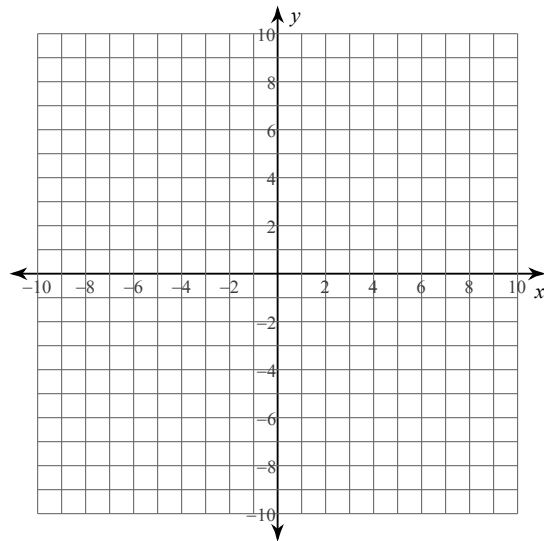
8)  $5x + 9y = 81$   
 $11x - 9y = 63$



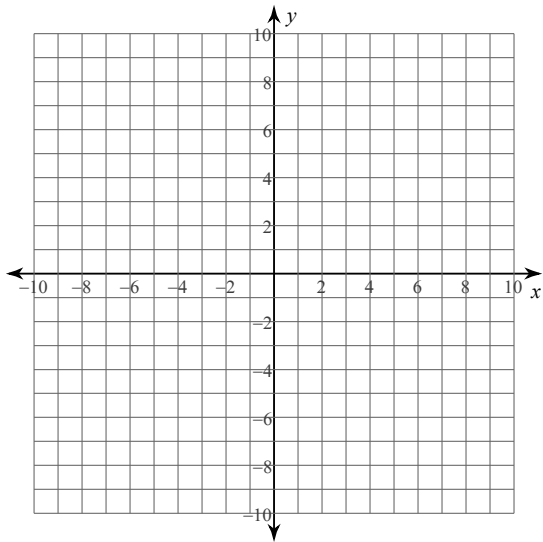
$$9) \begin{aligned} 6 + x &= -y \\ 0 &= -3 - 8x + y \end{aligned}$$



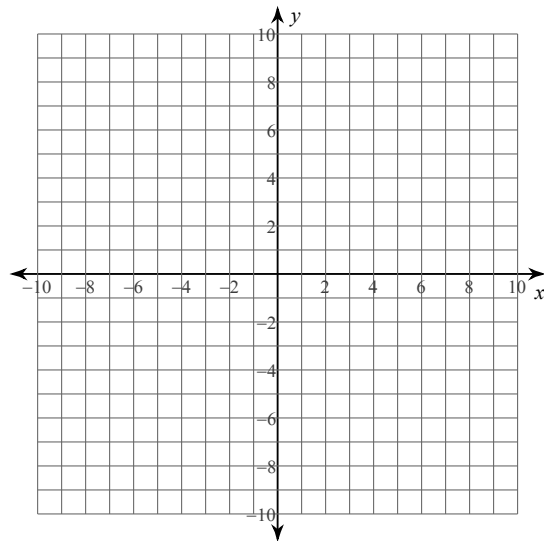
$$10) \begin{aligned} 2y &= -x - 18 \\ -x &= \frac{6}{7} - \frac{1}{7}y \end{aligned}$$



$$11) \begin{aligned} 1 + \frac{1}{18}x &= -\frac{1}{3}y \\ 42 &= -5x - 6y \end{aligned}$$



$$12) \begin{aligned} 0 &= -21 + 3y - x \\ -3y + 10x &= 6 \end{aligned}$$



**Solve each system by substitution.**

$$\begin{aligned} 13) \quad & y = -5x + 22 \\ & y = -3x + 10 \end{aligned}$$

$$\begin{aligned} 14) \quad & y = 3x - 8 \\ & y = 5x - 18 \end{aligned}$$

$$\begin{aligned} 15) \quad & y = 7x + 21 \\ & -6x - 4y = -16 \end{aligned}$$

$$\begin{aligned} 16) \quad & -7x + 7y = -7 \\ & y = 2x - 4 \end{aligned}$$

$$\begin{aligned} 17) \quad & -5x - 5y = 0 \\ & -8x + y = -18 \end{aligned}$$

$$\begin{aligned} 18) \quad & -x + 5y = 21 \\ & 4x + y = 21 \end{aligned}$$

$$\begin{aligned} 19) \quad & 6x + 5y = -17 \\ & x - 4y = 2 \end{aligned}$$

$$\begin{aligned} 20) \quad & -2x + y = 7 \\ & -7x + 4y = 22 \end{aligned}$$

$$\begin{aligned} 21) \quad & 7x + 4y = 12 \\ & -x + 8y = 24 \end{aligned}$$

$$\begin{aligned} 22) \quad & 7x + 2y = -23 \\ & 4x + 4y = 4 \end{aligned}$$

$$\begin{aligned} 23) \quad & 7x - y = -15 \\ & 5x - y = -13 \end{aligned}$$

$$\begin{aligned} 24) \quad & -4x + 8y = -20 \\ & -x + 4y = -7 \end{aligned}$$

## Answers to Solving Systems of Equations - Graphing and Substitution

1)  $(-2, -9)$

5)  $(-6, -2)$

9)  $(-1, -5)$

13)  $(6, -8)$

17)  $(2, -2)$

21)  $(0, 3)$

2)  $(-6, 8)$

6)  $(7, 1)$

10)  $(-2, -8)$

14)  $(5, 7)$

18)  $(4, 5)$

22)  $(-5, 6)$

3)  $(9, 4)$

7)  $(6, -5)$

11)  $(-6, -2)$

15)  $(-2, 7)$

19)  $(-2, -1)$

23)  $(-1, 8)$

4)  $(4, 7)$

8)  $(9, 4)$

12)  $(3, 8)$

16)  $(3, 2)$

20)  $(-6, -5)$

24)  $(3, -1)$