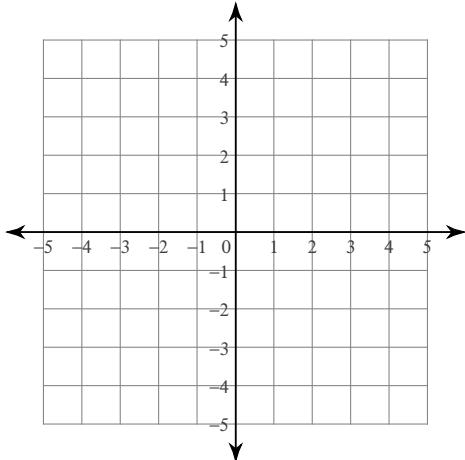


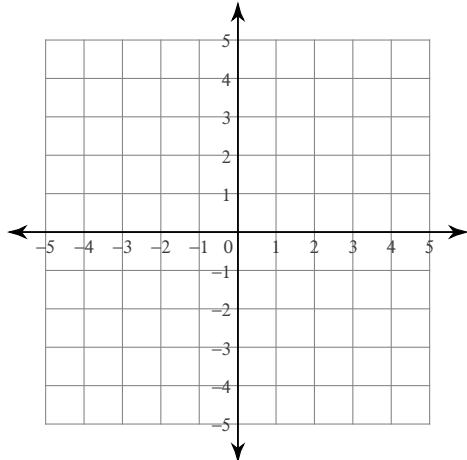
Systems of Two Equations

Solve each system by graphing.

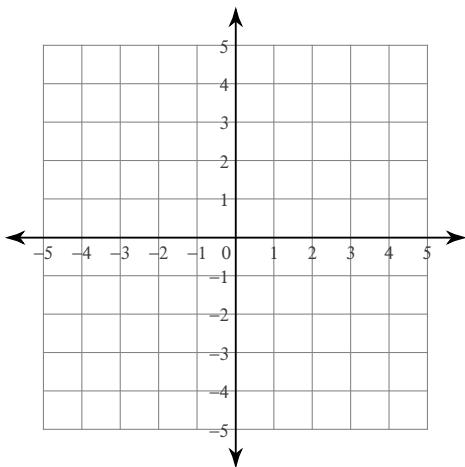
1) $y = -3x + 4$
 $y = 3x - 2$



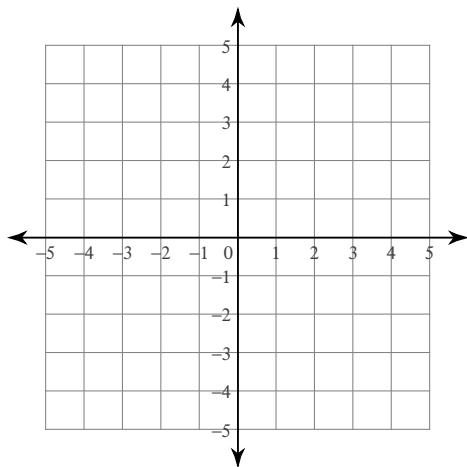
2) $y = x + 2$
 $x = -3$



3) $x - y = 3$
 $7x - y = -3$



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

**Solve each system by substitution.**

5) $y = 4x - 9$
 $y = x - 3$

6) $4x + 2y = 10$
 $x - y = 13$

7) $y = -5$
 $5x + 4y = -20$

8) $x + 7y = 0$
 $2x - 8y = 22$

$$9) \begin{aligned} 6x + 8y &= -22 \\ y &= -5 \end{aligned}$$

$$11) \begin{aligned} 7x + 2y &= -19 \\ -x + 2y &= 21 \end{aligned}$$

$$13) \begin{aligned} -7x + 4y &= 24 \\ 4x - 4y &= 0 \end{aligned}$$

$$10) \begin{aligned} -7x + 2y &= 18 \\ 6x + 6y &= 0 \end{aligned}$$

$$12) \begin{aligned} 3x - 5y &= 17 \\ y &= -7 \end{aligned}$$

$$14) \begin{aligned} 4x - y &= 20 \\ -2x - 2y &= 10 \end{aligned}$$

Solve each system by elimination.

$$15) \begin{aligned} 8x - 6y &= -20 \\ -16x + 7y &= 30 \end{aligned}$$

$$16) \begin{aligned} 6x - 12y &= 24 \\ -x - 6y &= 4 \end{aligned}$$

$$17) \begin{aligned} -8x - 10y &= 24 \\ 6x + 5y &= 2 \end{aligned}$$

$$18) \begin{aligned} -24 - 8x &= 12y \\ 1 + \frac{5}{9}y &= -\frac{7}{18}x \end{aligned}$$

$$19) \begin{aligned} -4y - 11x &= 36 \\ 20 = -10x - 10y & \end{aligned}$$

$$20) \begin{aligned} -9 + 5y &= -4x \\ -11x &= -20 + 9y \end{aligned}$$

$$21) \begin{aligned} 0 &= -2y + 10 - 6x \\ 14 - 22y &= 18x \end{aligned}$$

$$22) \begin{aligned} -16y &= 22 + 6x \\ -11y - 4x &= 15 \end{aligned}$$

$$23) \begin{aligned} -16 + 20x - 8y &= 0 \\ 36 = -18y - 22x & \end{aligned}$$

$$24) \begin{aligned} -\frac{5}{7} - \frac{11}{7}x &= -y \\ 2y &= 7 + 5x \end{aligned}$$

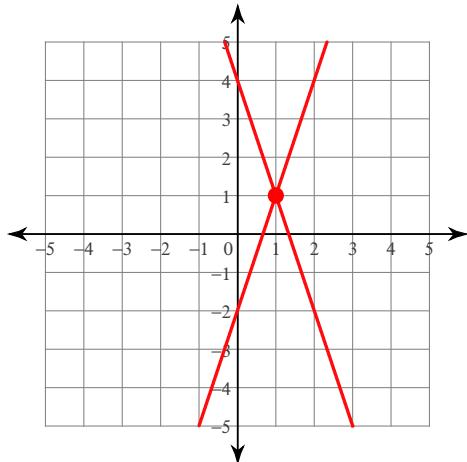
Critical thinking questions:

25) Write a system of equations with the solution $(4, -3)$.

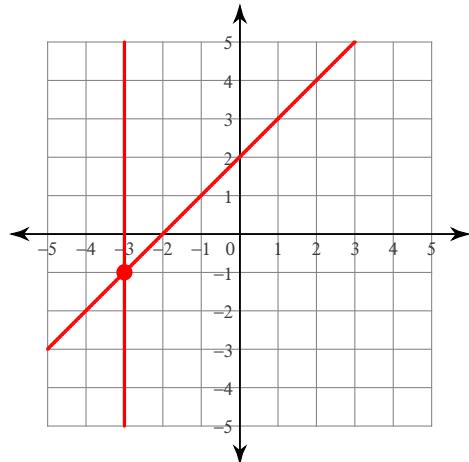
Systems of Two Equations

Solve each system by graphing.

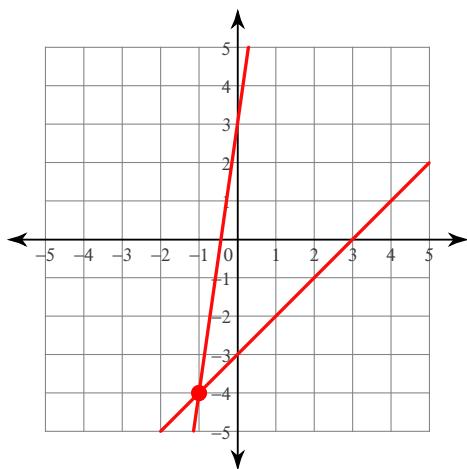
1) $y = -3x + 4$
 $y = 3x - 2$



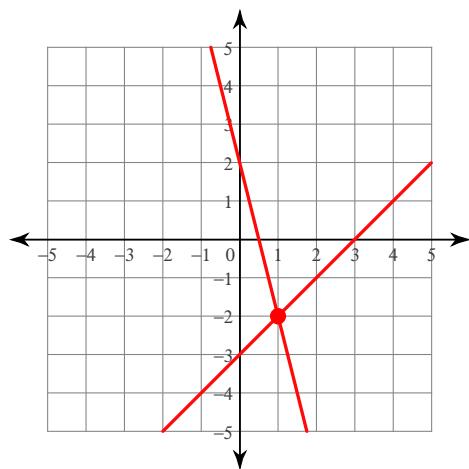
2) $y = x + 2$
 $x = -3$



3) $x - y = 3$
 $7x - y = -3$



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



Solve each system by substitution.

5) $y = 4x - 9$
 $y = x - 3$

 $(2, -1)$

6) $4x + 2y = 10$
 $x - y = 13$

 $(6, -7)$

7) $y = -5$
 $5x + 4y = -20$

 $(0, -5)$

8) $x + 7y = 0$
 $2x - 8y = 22$

 $(7, -1)$

$$9) 6x + 8y = -22$$

$$y = -5$$

$$(3, -5)$$

$$11) 7x + 2y = -19$$

$$-x + 2y = 21$$

$$(-5, 8)$$

$$13) -7x + 4y = 24$$

$$4x - 4y = 0$$

$$(-8, -8)$$

$$10) -7x + 2y = 18$$

$$6x + 6y = 0$$

$$(-2, 2)$$

$$12) 3x - 5y = 17$$

$$y = -7$$

$$(-6, -7)$$

$$14) 4x - y = 20$$

$$-2x - 2y = 10$$

$$(3, -8)$$

Solve each system by elimination.

$$15) 8x - 6y = -20$$

$$-16x + 7y = 30$$

$$(-1, 2)$$

$$16) 6x - 12y = 24$$

$$-x - 6y = 4$$

$$(2, -1)$$

$$17) -8x - 10y = 24$$

$$6x + 5y = 2$$

$$(7, -8)$$

$$18) -24 - 8x = 12y$$

$$1 + \frac{5}{9}y = -\frac{7}{18}x$$

$$(6, -6)$$

$$19) -4y - 11x = 36$$

$$20 = -10x - 10y$$

$$(-4, 2)$$

$$20) -9 + 5y = -4x$$

$$-11x = -20 + 9y$$

$$(1, 1)$$

$$21) 0 = -2y + 10 - 6x$$

$$14 - 22y = 18x$$

$$(2, -1)$$

$$22) -16y = 22 + 6x$$

$$-11y - 4x = 15$$

$$(-1, -1)$$

$$23) -16 + 20x - 8y = 0$$

$$36 = -18y - 22x$$

$$(0, -2)$$

$$24) -\frac{5}{7} - \frac{11}{7}x = -y$$

$$2y = 7 + 5x$$

$$(-3, -4)$$

Critical thinking questions:

25) Write a system of equations with the solution $(4, -3)$.

Many answers. Ex: $x + y = 1$, $2x + y = 5$