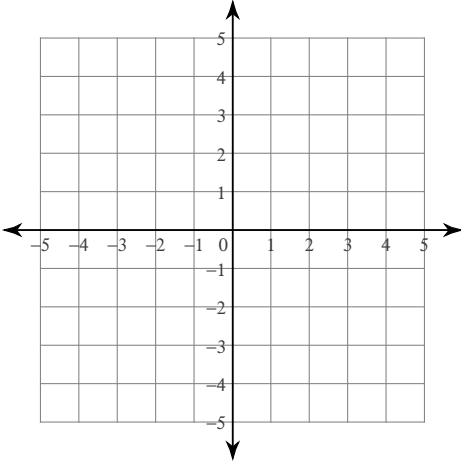


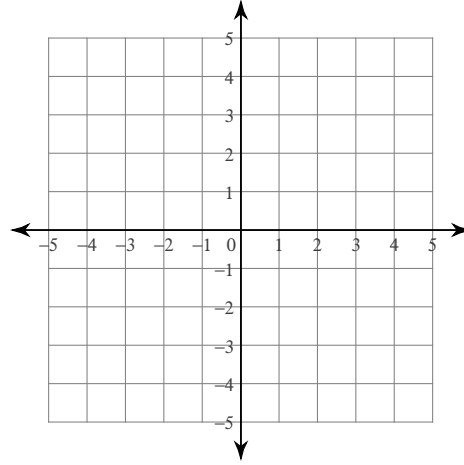
Systems of Two Equations

Solve each system by graphing.

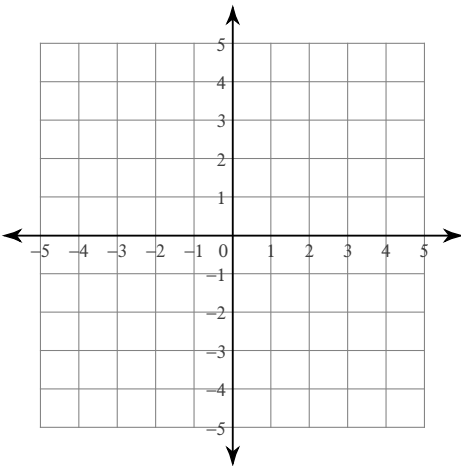
$$1) \begin{cases} y = -3x + 4 \\ y = 3x - 2 \end{cases}$$



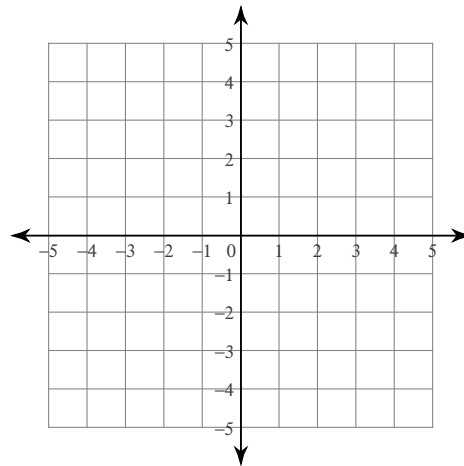
$$2) \begin{cases} y = x + 2 \\ x = -3 \end{cases}$$



$$3) \begin{cases} x - y = 3 \\ 7x - y = -3 \end{cases}$$



$$4) \begin{cases} 4x + y = 2 \\ x - y = 3 \end{cases}$$



Solve each system by substitution.

$$5) \begin{cases} y = 4x - 9 \\ y = x - 3 \end{cases}$$

$$6) \begin{cases} 4x + 2y = 10 \\ x - y = 13 \end{cases}$$

$$7) \begin{cases} y = -5 \\ 5x + 4y = -20 \end{cases}$$

$$8) \begin{cases} x + 7y = 0 \\ 2x - 8y = 22 \end{cases}$$

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

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

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

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

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

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

Solve each system by elimination.

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

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

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

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

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

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

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

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

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

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

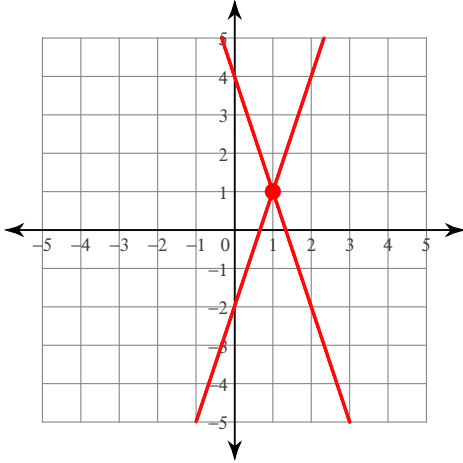
Critical thinking questions:

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

Systems of Two Equations

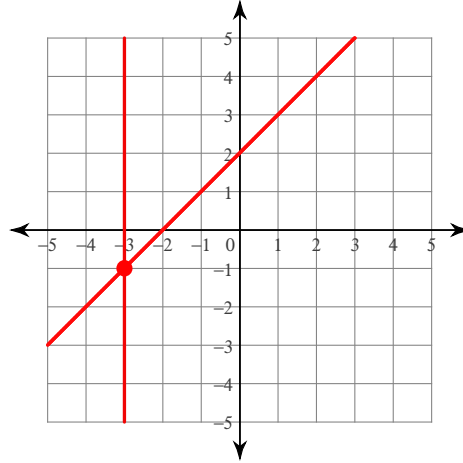
Solve each system by graphing.

$$1) \begin{aligned} y &= -3x + 4 \\ y &= 3x - 2 \end{aligned}$$



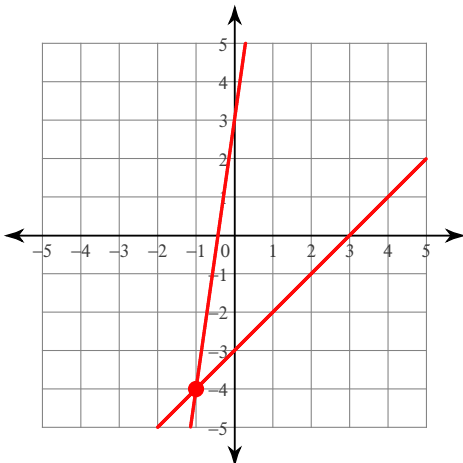
(1, 1)

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



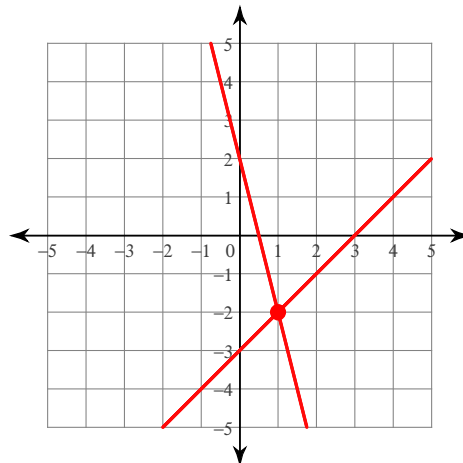
(-3, -1)

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



(-1, -4)

$$4) \begin{aligned} 4x + y &= 2 \\ x - y &= 3 \end{aligned}$$



(1, -2)

Solve each system by substitution.

$$5) \begin{aligned} y &= 4x - 9 \\ y &= x - 3 \end{aligned}$$

(2, -1)

$$6) \begin{aligned} 4x + 2y &= 10 \\ x - y &= 13 \end{aligned}$$

(6, -7)

$$7) \begin{aligned} y &= -5 \\ 5x + 4y &= -20 \end{aligned}$$

(0, -5)

$$8) \begin{aligned} x + 7y &= 0 \\ 2x - 8y &= 22 \end{aligned}$$

(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: $x + y = 1$, $2x + y = 5$