

Chapter 7 Quest REVIEW

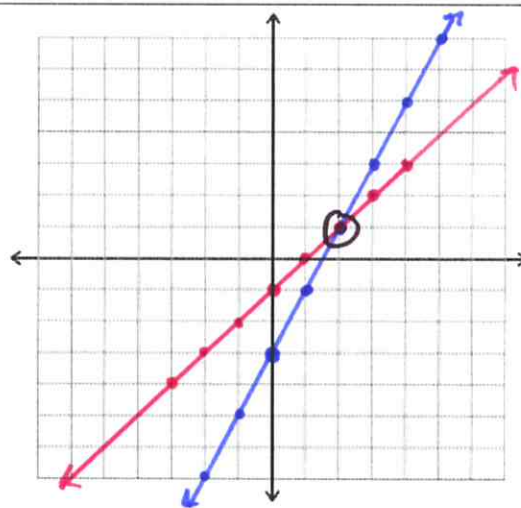
1.
Solve the system of linear equations by graphing

$$y = 2x - 3$$

$$y = x - 1$$

(Calculator hint: Both equations must be in $y = mx + b$)

Solution: (2,1)



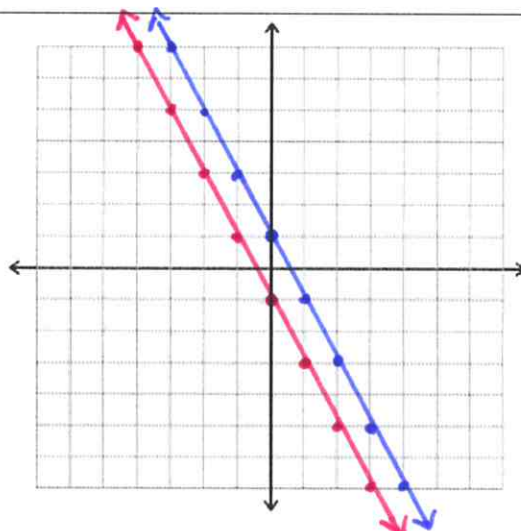
2.
Solve by graphing

$$y = -2x + 1$$

$$y = -2x - 1$$

(Calculator hint: Both equations must be in $y = mx + b$)

Solution: No Solutions



3.
Solve by graphing

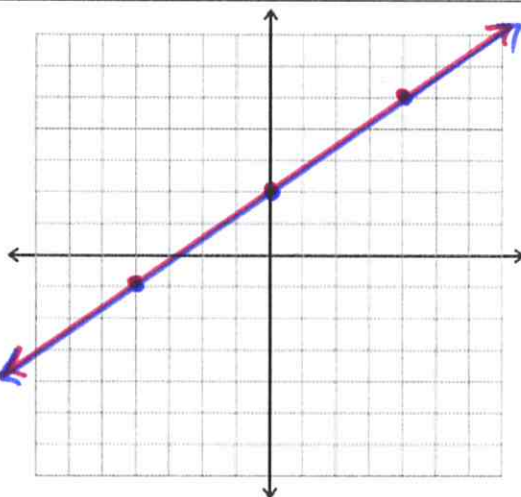
$$y = \frac{3}{4}x + 2$$

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

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

(Calculator hint: Both equations must be in $y = mx + b$)

Solution: Infinite Solutions



4.

Solve using substitution.

$$y = -4x - 8$$

$$y = x + 7$$

$$-4x - 8 = x + 7$$

$$\begin{array}{r} -x \quad -x \\ -5x - 8 = 7 \end{array}$$

$$-5x - 8 = 7$$

$$\begin{array}{r} +8 \quad +8 \\ -5x = 15 \end{array}$$

$$-5x = 15$$

$$\begin{array}{r} -5 \quad -5 \\ x = -3 \end{array}$$

$$y = x + 7$$

$$y = (-3) + 7$$

$$y = 4$$

$$(-3, 4)$$

Solution

5.

Solve using substitution.

$$y = 2x + 5$$

$$7x - y = 15$$

$$7x - (2x + 5) = 15$$

$$7x - 2x - 5 = 15$$

$$5x - 5 = 15$$

$$\begin{array}{r} +5 \quad +5 \\ 5x = 20 \end{array}$$

$$5x = 20$$

$$\begin{array}{r} 5 \quad 5 \\ x = 4 \end{array}$$

$$y = 2x + 5$$

$$y = 2(4) + 5$$

$$y = 8 + 5$$

$$y = 13$$

$$(4, 13)$$

Solution

6.

Solve using elimination.

$$-1(2x + 2y = 10) \rightarrow -2x - 2y = -10$$

$$5x + 2y = 7 \rightarrow +5x + 2y = 7$$

$$\begin{array}{r} 3x + 0 = -3 \end{array}$$

$$3x = -3$$

$$\begin{array}{r} 3 \quad 3 \\ x = -1 \end{array}$$

$$2x + 2y = 10$$

$$2(-1) + 2y = 10$$

$$-2 + 2y = 10$$

$$\begin{array}{r} +2 \quad +2 \\ 2y = 12 \end{array}$$

$$2y = 12$$

$$\begin{array}{r} 2 \quad 2 \\ y = 6 \end{array}$$

$$(-1, 6)$$

Solution

7.

Solve using elimination.

$$6x + 4y = 18 \rightarrow 6x + 4y = 18$$

$$-2(3x + y = 4) \rightarrow -6x - 2y = -8$$

$$\begin{array}{r} 0 + 2y = 6 \end{array}$$

$$\begin{array}{r} 2y = 6 \\ 2 \quad 2 \\ y = 3 \end{array}$$

$$3x + y = 4$$

$$3x + (3) = 4$$

$$\begin{array}{r} -3 \quad -3 \\ 3x = 1 \end{array}$$

$$3x = 1$$

$$\begin{array}{r} 3 \quad 3 \\ x = 1/3 \end{array}$$

$$(1/3, 3)$$

Solution: