

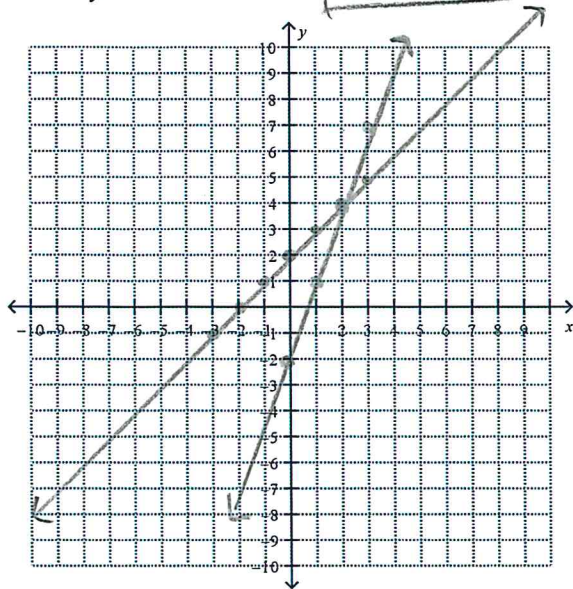
Key

Solving Systems of Equations Using All Methods WORKSHEET

PART 1: SOLVE THE SYSTEM OF EQUATIONS BY GRAPHING.

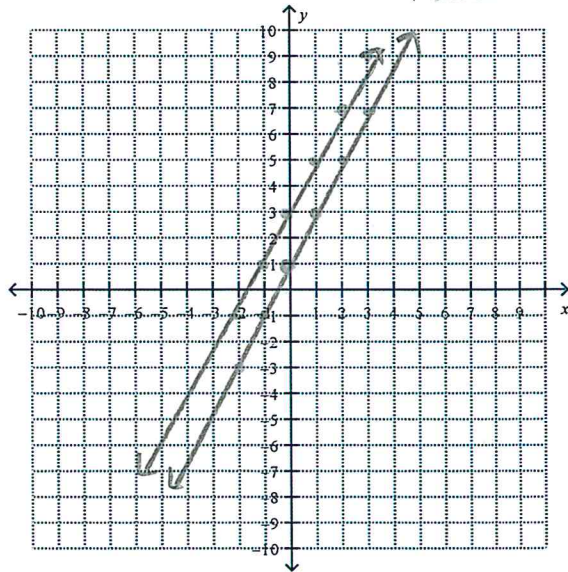
1. $y = x + 2$
 $y = 3x - 2$

$(2, 4)$



2. $y = 2x + 3$
 $y = 2x + 1$

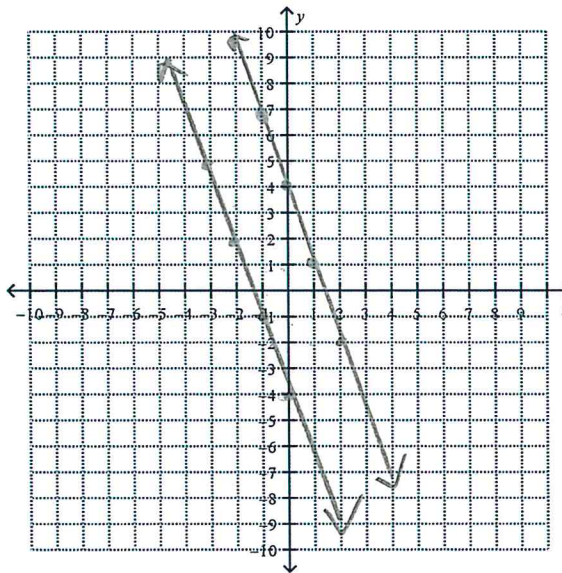
\emptyset



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

$y = -3x - 4$

\emptyset



PART 2: SOLVE THE SYSTEM OF EQUATIONS BY USING SUBSTITUTION.

4. $y = -x - 6$
 $y = x - 4$

$-x - 6 = x - 4$

$-2 = 2x$

$-1 = x$

$y = (-1) - 4$

$y = -5$

$(-1, -5)$

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

$$x - (3x - 2) = 4$$

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

$$-2x = 2$$

$$x = -1$$

$$y = 3(-1) - 2$$

$$y = -3 - 2$$

$$y = -5$$

$(-1, -5)$

6. $y = 2x - 10$
 $y = 4x - 8$

$$2x - 10 = 4x - 8$$

$$-2 = 2x$$

$$-1 = x$$

$$y = 4(-1) - 8$$

$$y = -12$$

$(-1, -12)$

7. $2y = 2x + 12$
 $y = -2x - 3$

$$2(-2x - 3) = 2x + 12$$

$$-4x - 6 = 2x + 12$$

$$-6x = 18$$

$$x = -3$$

$$y = -2(-3) - 3$$

$$y = 6 - 3$$

$$y = 3$$

$(-3, 3)$

PART 3: SOLVE THE SYSTEM OF EQUATIONS USING ELIMINATION.

8. $4x + 3y = -5$
 $2[-2x + 2y = 6]$

$$4x + 3y = -5$$

$$\underline{-4x + 4y = 12}$$

$$7y = 7$$

$$y = 1$$

$$4x + 3(1) = -5$$

$$4x + 3 = -5$$

$$4x = -8$$

$$x = -2$$

$(-2, 1)$

9. $2[8x + 3y = 13] \rightarrow 16x + 6y = 26$

$$\underline{-3[3x + 2y = 11] \rightarrow -9x - 6y = -33}$$

$$7x = -7$$

$$x = -1$$

$$8(-1) + 3y = 13$$

$$3y = 21$$

$$y = 7$$

$(-1, 7)$

10. $5x + 4y = -7$

$$\underline{-5x - 2y = 1}$$

$$2y = -6$$

$$y = -3$$

$$5x + 4(-3) = -7$$

$$5x = 5$$

$$x = 1$$

$$5(1) + 4y = -7$$

$$4y = -12$$

$$y = -3$$

$(1, -3)$

11. $-1[-2x + 2y = 6] \rightarrow 2x - 2y = -6$

$$4x + 2y = -5$$

$$\underline{2x - 2y = -6}$$

$$6x = -11$$

$$x = \frac{-11}{6}$$

$$4\left(\frac{-11}{6}\right) + 2y = -5$$

$$\frac{-44}{6} + 2y = -5$$

$$-44 + 12y = -30$$

$$12y = 14$$

$$y = \frac{7}{6}$$

$(-\frac{11}{6}, \frac{7}{6})$