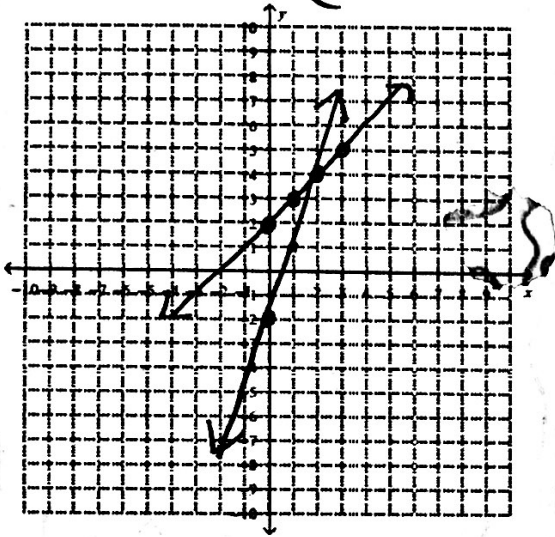


Systems Review

PART 1: SOLVE THE SYSTEM OF EQUATIONS BY GRAPHING.

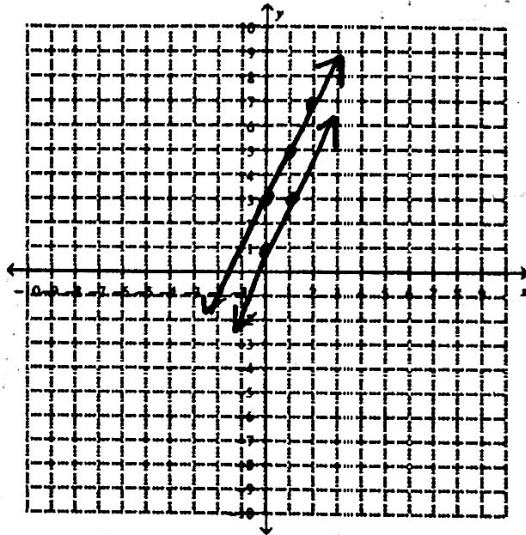
1. $y = x + 2$
 $y = 3x - 2$

$(2, 4)$



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

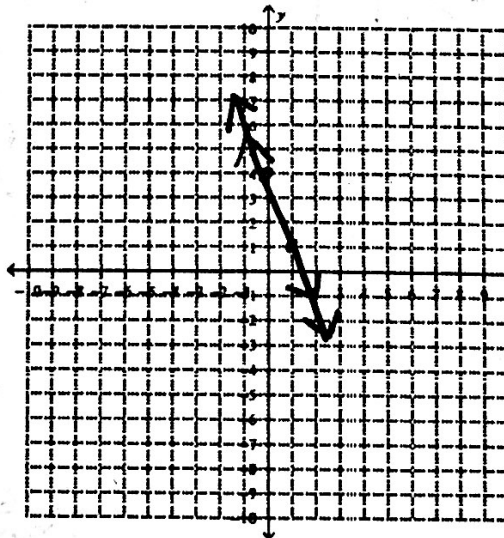
\emptyset



3. $y = -3x + 4$

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

$y = -3x + 4$



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

4. $y = -x - 6$
 $x = x - 4$
 $(-1, -5)$

$$\begin{array}{r} -x - 6 = x - 4 \\ -x + 6 \quad -x + 6 \\ \hline -2x = 2 \\ x = -1 \end{array}$$

$$\begin{array}{l} y = -1 - 4 \\ y = -5 \end{array}$$

5. $y = 3x + 2$
 $x = 4$
 $(-3, -7)$

$$\begin{array}{r} x - 1(3x + 2) = 4 \\ x - 3x - 2 = 4 \\ -2x - 2 = 4 \\ +2 \quad +2 \\ \hline -2x = 6 \\ x = -3 \end{array}$$

$$\begin{array}{l} y = 3(-3) + 2 \\ -9 + 2 \\ -7 \end{array}$$

6. $y = 2x - 10$
 $y = 4x - 8$
 $(-1, -12)$

$$\begin{array}{r} 2x - 10 = 4x - 8 \\ -2x + 8 \quad -2x + 8 \\ \hline -2 = 2x \\ -1 = x \end{array}$$

$$\begin{array}{l} y = 2(-1) - 10 \\ -2 - 10 \\ -12 \end{array}$$

7. $2y = 2x + 12$
 $y = -2x - 3$
 $(-3, 3)$

$$\begin{array}{r} 2(-2x - 3) = 2x + 12 \\ -4x - 6 = 2x + 12 \\ +4x - 12 \quad +4x - 12 \\ \hline -18 = 6x \\ -3 = x \end{array}$$

$$\begin{array}{l} y = -2(-3) - 3 \\ 6 - 3 \\ 3 \end{array}$$

PART 3: SOLVE THE SYSTEM OF EQUATIONS USING ELIMINATION.

8. $4x + 3y = -5$
 $2(-2x + 2y) = 6$
 $(-2, 1)$

$$\begin{array}{r} 4x + 3y = -5 \\ -4x + 4y = 12 \\ \hline 7y = 7 \\ y = 1 \end{array}$$

$$\begin{array}{l} 4x + 3(1) = -5 \\ 4x + 3 = -5 \\ 4x = -8 \\ x = -2 \end{array}$$

9. $5x + 4y = -7$
 $5x - 2y = 1$
 $(1, -3)$
 $y = 3$

$$\begin{array}{r} 5x + 4y = -7 \\ 5x - 2y = 1 \\ \hline 2y = -6 \\ y = -3 \end{array}$$

$$\begin{array}{l} 5x + 4(-3) = -7 \\ 5x - 12 = -7 \\ +12 \quad +12 \\ \hline 5x = 5 \\ x = 1 \end{array}$$

PART 4: SPECIAL CASES

10. $y = -5x - 2$
 $5x + y = 0$
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$$\begin{array}{r} 5x + y = 0 \\ 5x - 5x - 2 = 0 \\ -2 \neq 0 \end{array}$$

11. $x - 2y = 5$
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$$\begin{array}{r} -2x + 4y = -10 \\ 2x + 4y = 10 \\ \hline 0 = 0 \end{array}$$

$$\begin{array}{l} 5x = 5 \\ x = 1 \end{array}$$