

UNIT 5 TEST 1 - STUDY GUIDE

Name: Answer Key

1) Tell whether the ordered pair $(-2, 3)$ is a solution to the system $\begin{cases} x - y = 2 \\ 3y = x + 3 \end{cases}$

$$-2 - 3 = 2$$

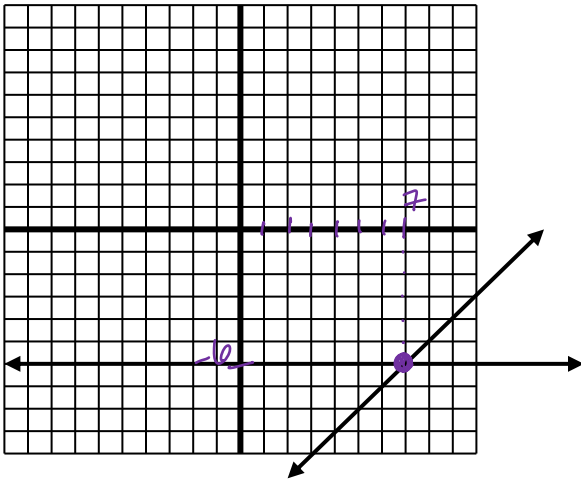
$$-5 = 2$$

NO !

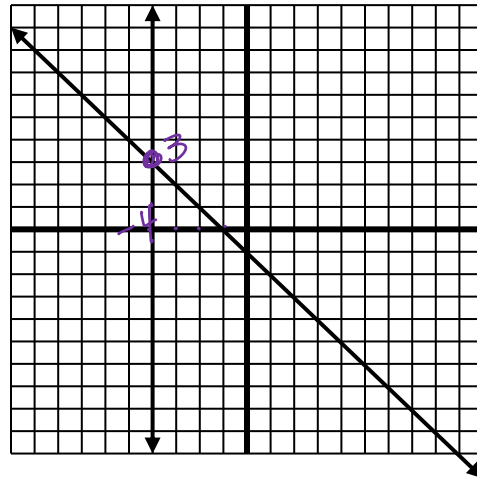
Not a solution!

#2-3) What is the solution to the system of equations given the graphs below?

2) $(7, -6)$

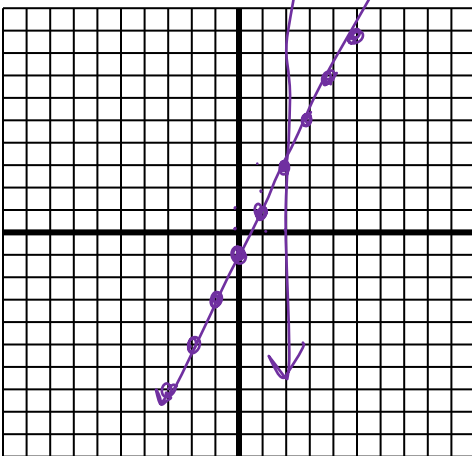


3) $(-4, 3)$



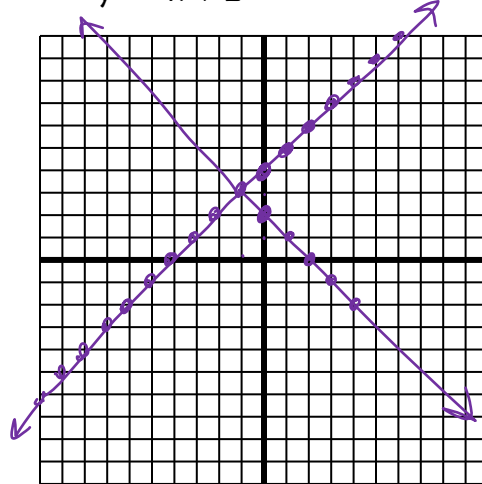
Solve each system of equations using the **GRAPHING METHOD**.

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



Solution: $(2, 3)$

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



Solution: $(-1, 3)$

Solve each system of equations using the **SUBSTITUTION METHOD**.

$$\begin{aligned} 6) \quad y &= x + 1 \\ y &= 2x - 1 \\ x + 1 &= 2x - 1 \\ 2 &= x \\ y &= 2 + 1 \\ y &= 3 \\ (2, 3) \end{aligned}$$

$$\begin{aligned} 7) \quad y &= x - 2 \\ 2x + 2y &= 4 \\ 2x + 2(x - 2) &= 4 \\ 2x + 2x - 4 &= 4 \\ 4x &= 8 \\ x &= 2 \\ y &= 2 - 2 \\ y &= 0 \end{aligned} \quad (2, 0)$$

Solve each system of equations using the **ELIMINATION METHOD**

$$\begin{aligned} 8) \quad 2x + 5y &= 17 \\ + \quad 6x - 5y &= -9 \\ \hline 8x &= 8 \\ x &= 1 \\ 2(1) + 5y &= 17 \\ 2 + 5y &= 17 \\ 5y &= 15 \\ y &= 3 \\ (1, 3) \end{aligned}$$

$$\begin{aligned} 9) \quad \begin{matrix} 3 \\ 2 \end{matrix} \left(\begin{matrix} 3x - 2y = 10 \\ 2x + 3y = -2 \end{matrix} \right) & \quad \begin{matrix} 9x - 6y = 30 \\ 4x - 6y = -4 \end{matrix} \\ \hline & \quad \begin{matrix} 13x = 26 \\ x = 2 \end{matrix} \\ (2, -2) & \quad \begin{matrix} 3(2) - 2y = 10 \\ 6 - 2y = 10 \\ -2y = 4 \\ y = -2 \end{matrix} \end{aligned}$$