

UNIT 5 DAY 3: STUDY GUIDE

Name: Answer key

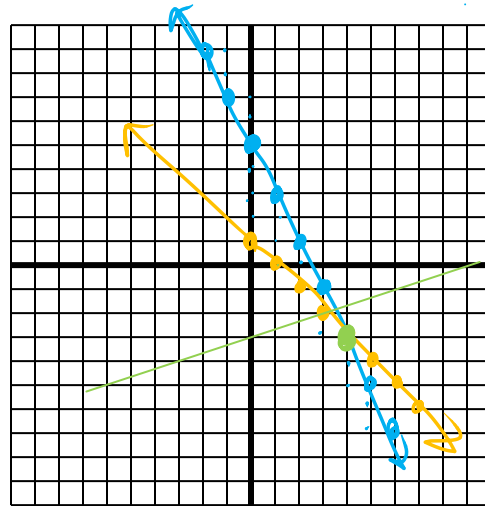
Solve the system by graphing the equations.

1)  $y = -2x + 5$   
 $y = -x + 1$

Solution (4, -3)

Check

$y = -2x + 5$	$y = -x + 1$
$-3 = -2(4) + 5$	$-3 = -4 + 1$
$-3 = -8 + 5$	$-3 = -3$
$-3 = -3$ 😊	$-3 = -3$ 😊



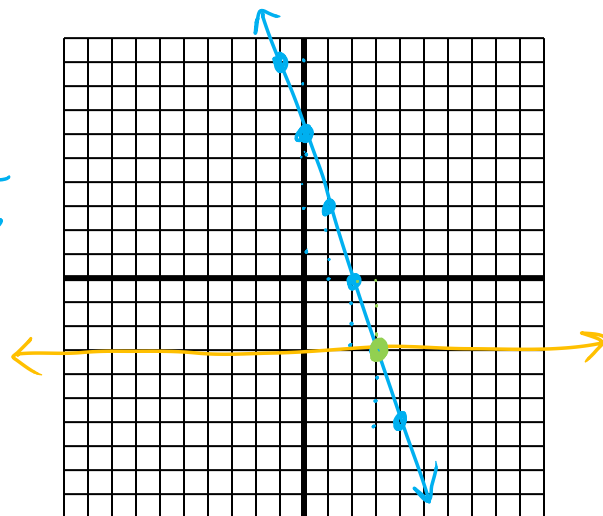
2)  $3x + y = 6$   
 $y = -3$

Solution (3, -3)

Check

$3x + y = 6$	$y = -3$
$3(3) + (-3) = 6$	$-3 = -3$
$9 - 3 = 6$	😊
$6 = 6$	😊

$$\begin{array}{r} 3x + y = 6 \\ -3x \quad -3x \\ \hline y = -3x + 6 \end{array}$$



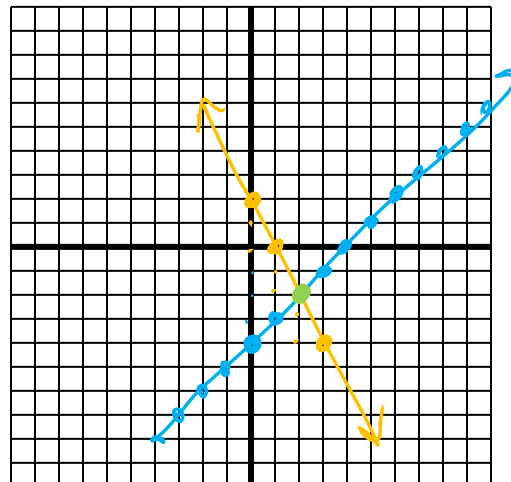
3)  $x - y = 4$   
 $2x + y = 2$

Solution (2, -2)

Check

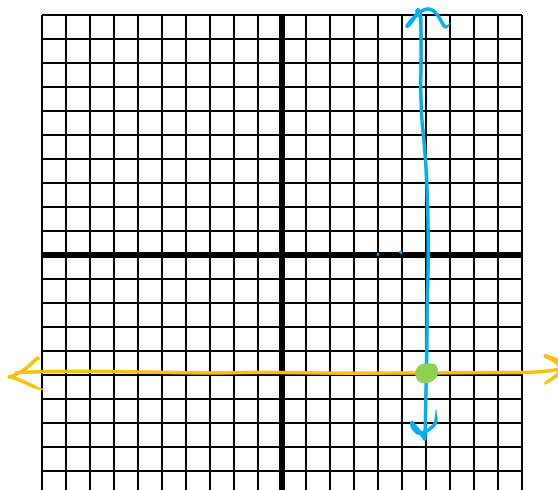
$x - y = 4$	$2x + y = 2$
$2 - (-2) = 4$	$2(2) + (-2) = 2$
$4 = 4$ 😊	$4 - 2 = 2$
	$2 = 2$ 😊

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



$$4) \begin{aligned} x &= 6 \\ y &= -5 \end{aligned}$$

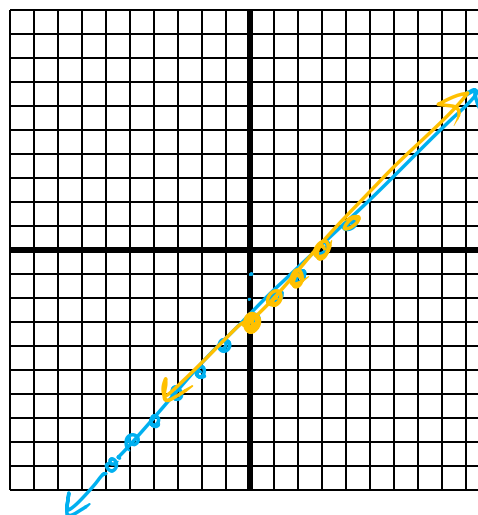
Solution  $(\underline{6}, \underline{-5})$



$$5) \begin{aligned} x - y &= 3 & \rightarrow & \begin{aligned} x - y &= 3 \\ -x & \quad -x \end{aligned} \\ -3y &= -3x + 9 & & \begin{aligned} -y &= -x + 3 \\ \frac{-y}{-1} &= \frac{-x + 3}{-1} \end{aligned} \\ \hline y &= x - 3 & & y = x - 3 \end{aligned}$$

Solution  $(\underline{\quad}, \underline{\quad})$

all/infinite solutions!  
 actually same equation/line!  
 ↑  
 so cool 😊



$$6) \begin{aligned} 4y &= x - 4 & y &= \frac{1}{4}x - 1 \\ \frac{4y}{4} &= \frac{x - 4}{4} & & \\ y &= \frac{1}{4}x - 1 & & \\ y &= \frac{1}{4}x - 6 \end{aligned}$$

Solution  $(\underline{\quad}, \underline{\quad})$  NO SOLUTION!

Because same slopes →  
 lines are //  
 and will not intersect

