

**UNIT 3**

**Section 1: Solving Systems of Equations by Graphing**

21. Solve the system of equations by graphing.

$$\begin{aligned} 2x + y &= 1 \\ 3x - y &= 4 \end{aligned}$$

$$\begin{aligned} 2x + y &= 1 \\ -2x & -2x \end{aligned}$$

$$y = -2x + 1$$

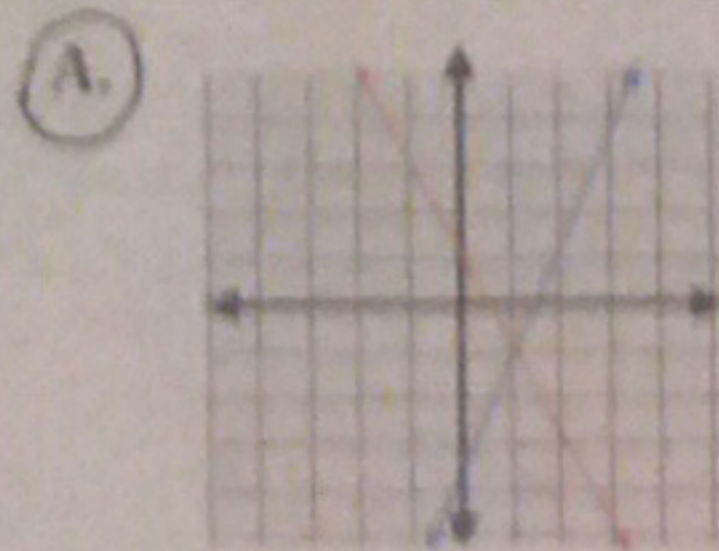
slope: -2  
y-intercept: (0, 1)

$$\begin{aligned} 3x - y &= 4 \\ -3x & -3x \end{aligned}$$

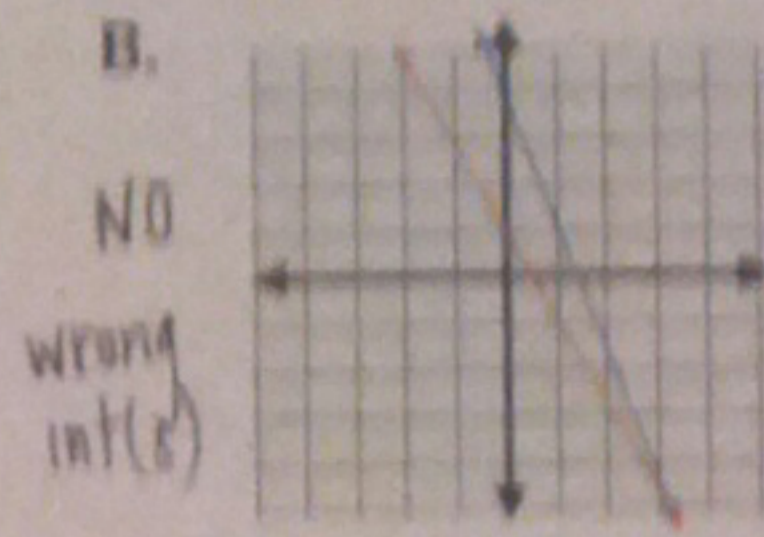
$$y = -3x + 4$$

$$y = 3x - 4$$

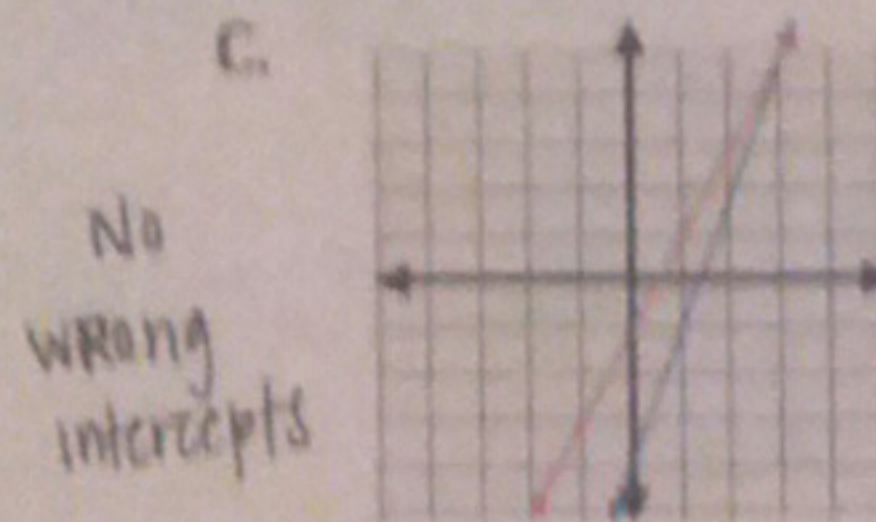
slope: 3  
y-intercept: (0, -4)



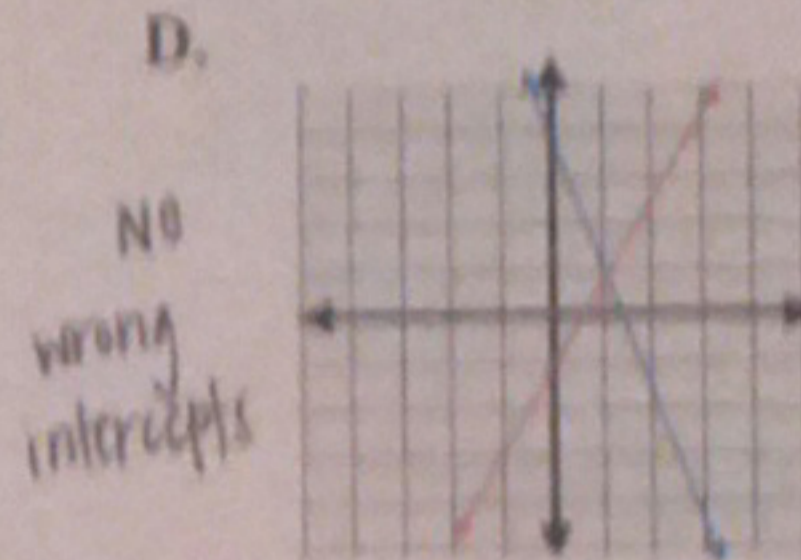
(1, -1)



(3, -5)



(3, 5)



(1, 1)

22. Solve the system of equations by graphing.

$$\begin{aligned} 2x - 3y &= -9 \\ x + y &= -2 \end{aligned}$$

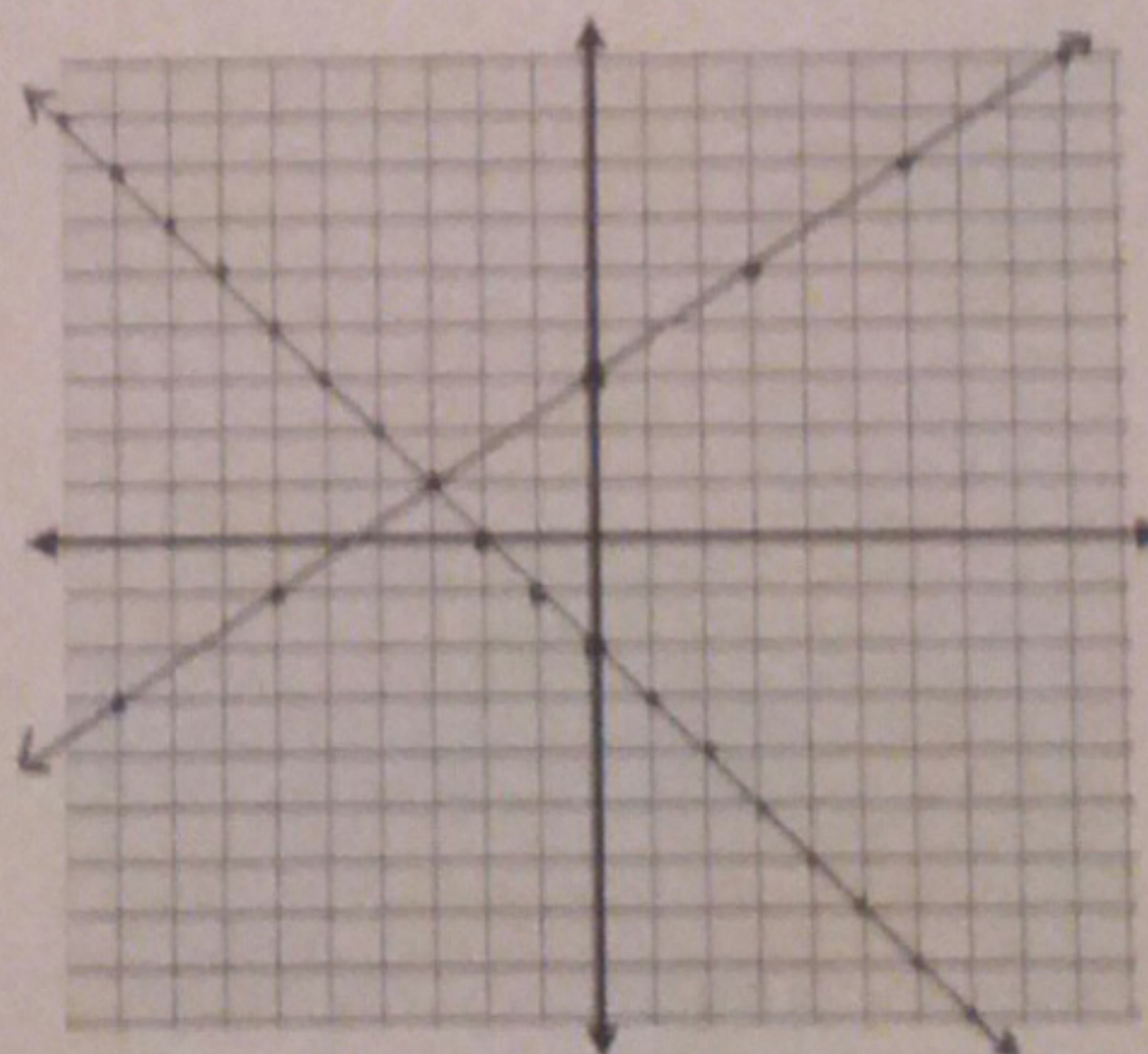
$$\begin{aligned} 2x - 3y &= -9 \\ -2x & -2x \end{aligned}$$

$$-3y = -2x - 9$$

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

$$x + y = -2$$

$$y = -x - 2$$



Solution: (-3, 1)

\* check by plugging point into both equations