

$$\textcircled{1} \quad x^2 + 2y = 4$$

$$x = 0$$

$$x + 2y = 4$$

$$2y = 4$$

$$y = 4/2$$

$$y = 2$$

$$y = 0$$

$$x^2 + 2y = 4$$

$$x^2 = 4$$

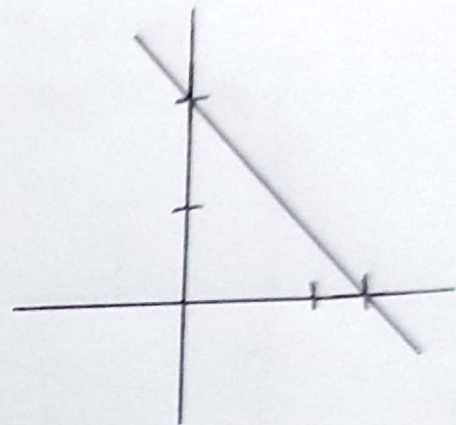
$$x = \sqrt{4}$$

$$x = 2$$

INTERSECCIONES

$$(0, 2)$$

$$(2, 0)$$



$\textcircled{2}$ Hallar la ecuación de la recta, que pasa por el punto $A(2, -4)$ y tiene una pendiente de $-\frac{1}{3}$.

$$m = \tan^{-1} \ominus$$

$$\ominus = \tan^{-1} m$$

$$\ominus = \tan^{-1} \left(-\frac{1}{3}\right)$$

$$\ominus = -18.43$$

$$y - y_1 = m(x - x_1)$$

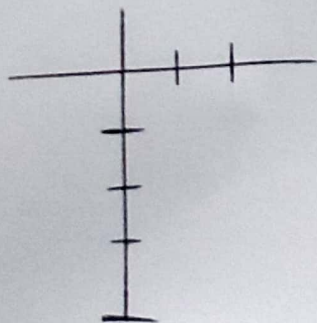
$$y + 4 = -\frac{1}{3}(x - 2)$$

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

$$Ax + By + C = 0$$

$$3y + 12 + x - 2 = 0$$

$$x + 3y + 10 = 0$$



③ Hallar la ecuación de la recta, que tiene una pendiente igual a ~~m~~ $m = -\frac{2}{7}$ y su intersección con el eje "y" es 3.

$$m = -\frac{2}{7}$$

$$b = 3$$

$$y = my + b$$

$$y = \left(-\frac{2}{7}\right)x + 3$$

$$\Theta = \text{TAN}^{-1} m$$

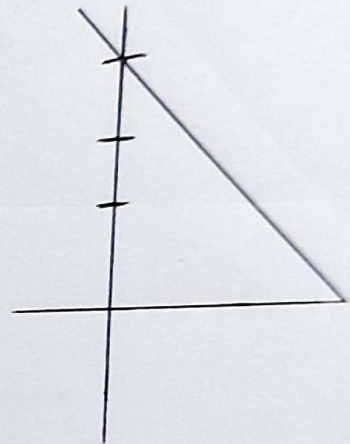
$$\Theta = \text{TAN}^{-1} \left(-\frac{2}{7}\right)$$

$$7y = -2x - 6$$

$$ax + by + c = 0$$

$$0 = -2x - 7y - 6$$

$$-2x - 7y - 6 = 0$$



④ Hallar la ecuación de la recta, que pasa por los puntos A(-3, -1) B(5, 2).

$$x_2 - y_2$$

$$y + 1 = \left(\frac{2 + 1}{5 + 3}\right)x + 3$$

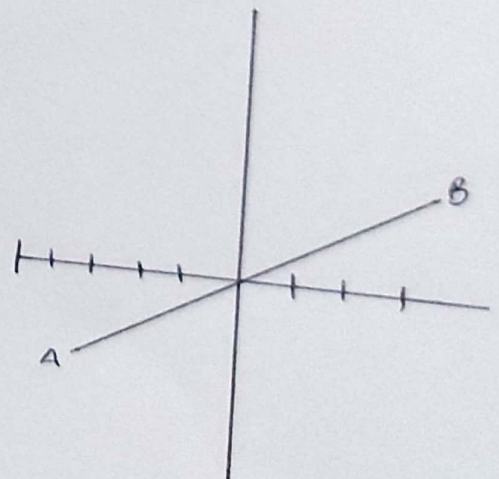
$$y - 1 = \left(\frac{3}{8}\right)x + 3$$

$$8y = 8 - 3x + 9$$

$$Ax + By + c = 0$$

$$0 = 3x - 8y + 17$$

$$3x - 8y + 17 = 0$$



5) Hallar la ecuación de la recta y determinar los coeficientes de la forma general, que pasa por el punto $A(-1, 9)$ y tiene una pendiente $m = -\frac{3}{2}$

$$y - y_1 = m(x - x_1)$$

$$y - 9 = \frac{3}{2}(x - (-1))$$

$$2y - 18 = 3x + 3$$

$$3x + 2y - 18 + 3 = 0$$

$$3x + 2y - 15 = 0$$

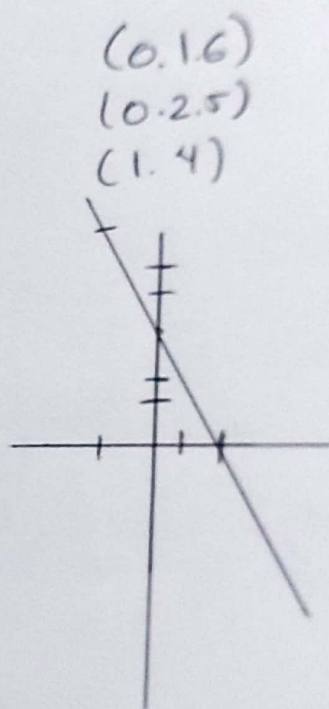
$$Ax + By + C = 0$$

$$Ax + By + C = 0$$

$$A = 3$$

$$B = 2$$

$$C = -15$$



⑥ HALLAR LA ECUACION DE LA RECTA QUE PASA POR EL PUNTO A (-5,2) TIENE UNA PENDIENTE $\frac{1}{3}$ ESCRIBIRLA EN LA FORMA GENERAL, COMUN Y CANONICA.

FORMULAS.

GENERAL: $Ax + By + C = 0$

COMUN: $y = mx + b$

CANONICA: $\frac{x}{a} + \frac{y}{b} = 1$

$A = \begin{pmatrix} x_1, x_1 \\ 5, 2 \end{pmatrix}$

$y - y_1 = m(x - x_1)$

$y - 2 = \frac{1}{3}(x + 5)$

$m = \frac{1}{3}$

$3y - 6 = x + 5$

$0 = x - 3y + 11$

$x - 3y + 11 = 0$

$Ax + By + C = 0$ GENERAL

$x - 3y + 11 = 0$

$-3y = -x - 11$

$y = \frac{-x - 11}{-3}$

$y = \frac{1}{3}x - \frac{11}{3}$ COMUN

7) UNA RECTA PASA POR LOS PUNTOS $P(-1, 3)$ y $Q(3, 4)$ HALLAR SU ECUACION, EN LA FORMA GENERAL Y COMUN Y CANONICA.

$$P = (-1, 3)$$

$$Q = (3, 4)$$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{4 - 3}{3 - (-1)}$$

$$\frac{4 - 3}{3 - (-1)} = \frac{1}{4}$$

$$y - y_1 = m(x - x_1)$$

$$y - 3 = \frac{1}{4}(x + 1)$$

$$4y - 12 = x + 1$$

$$0 = x - 4y + 1 + 12$$

$$x - 4y + 13 = 0 \quad \text{GENERAL}$$

$$y = mx + b$$

$$x - 4y + 13 = 0$$

$$-4y = -x - 13$$

$$y = \frac{-x - 13}{-4}$$

$$y = \frac{1}{4}x + \frac{13}{4}$$

$$a = \frac{c}{a} \quad b = \frac{c}{b}$$

$$a = \frac{1}{4} \quad b = \frac{13}{4}$$

$$\frac{x}{4} + \frac{y}{1} = 1$$

$$\frac{x}{4} + \frac{3y}{4} = 1$$

8) $3x - 7y - 21 = 0$
 $Ax + By + C = 0$

$$m = -\frac{A}{B}$$

$$m = \frac{3}{-7}$$

$$m = 3/7$$

$$y = ? \quad x = 0$$

$$3x - 7y - 21 = 0$$

$$-7y - 21 = 0$$

$$y = 2/7$$

$$7 = -3$$

$$0,3$$

$$x - 2 \quad y = 0$$

$$3x - 2 = 0$$

$$x = 2/3$$

$$x = 7$$

9) UNA RECTA PASA POR EL PUNTO $(7,8)$ Y ES PARALELA A LA RECTA FORMADA POR LOS PUNTOS $P(-2,2)$ Q(3,-4)

$\phi(3,-4)$ HALLAR SU ECUACION.

$$A(7,8) \parallel P(-2,2) \quad Q(3,-4)$$

$$m \parallel m_2 \quad m_1 = m_2$$

$$m_{PQ} = \frac{-4-2}{3+2} = \frac{-6}{5}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m_{PQ} = \frac{6}{5}$$

$$y - y_1 = m(x - x_1)$$

$$y - 8 = \frac{6}{5}(x - 7)$$

$$\Rightarrow y = 40 = -6x + 42$$

$$6x + 5y - 40 - 42 = 0$$

$$6x + 5y - 82 = 0$$