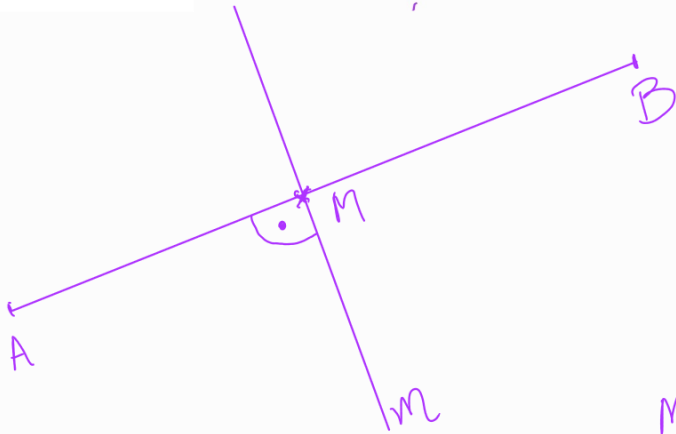


Hallar mediatriz de $\overline{AB}$ donde $A(-1,3)$ y $B(5,-3)$



2º Método (Geométrico)

$$m \begin{cases} M \text{ pto medio de } \overline{AB} \\ m \perp \overline{AB} \Rightarrow \overrightarrow{AB} = \vec{n}_m \end{cases}$$

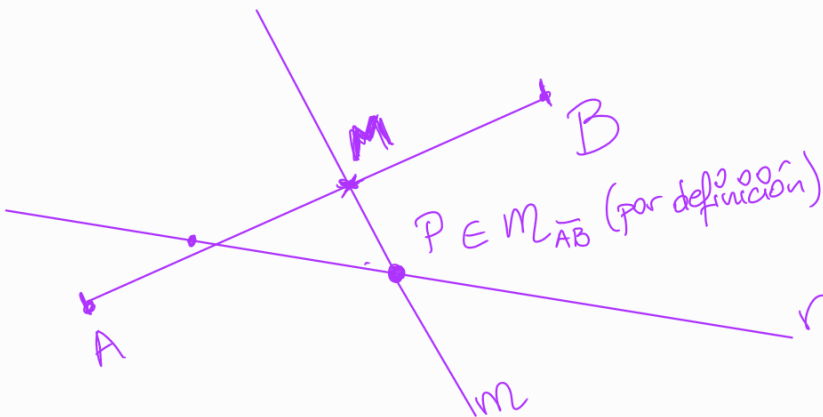
$$M = \left(\frac{-1+5}{2}, \frac{3+(-3)}{2} \right) = (2, 0)$$

$$\vec{n}_m = \overrightarrow{AB} = (5, -3) - (-1, 3) = (6, -6) // (1, -1)$$

$$m: 1 \cdot (x-2) - 1 \cdot (y-0) = 0$$

$$\boxed{x - y - 2 = 0}$$

54. Halla el punto de la recta $r: x - 3y - 11 = 0$ que equidista de los puntos $A(-2, 3)$ y $B(6, -1)$.



¿P? $P \in r$

$$\underbrace{d(P, A) = d(P, B)}_{\text{Mediatriz}}$$

$$\boxed{P = m \cap r}$$

$$m \begin{cases} M \text{ pto medio de } \overline{AB} = \left(\frac{-2+6}{2}, \frac{3+(-1)}{2} \right) = (2, 1) \\ \overline{AB} \perp m \Rightarrow \vec{n}_m = \overrightarrow{AB} = (6, -1) - (-2, 3) = (8, -4) // (2, -1) \end{cases}$$

$$m: 2 \cdot (x-2) - 1 \cdot (y-1) = 0$$

$$\underline{\underline{m: 2x - y - 3 = 0}}$$

$$P \begin{cases} r: x - 3y - 11 = 0 \Rightarrow x = 3y + 11 \\ m: 2x - y - 3 = 0 \end{cases} \Rightarrow 2(3y + 11) - y - 3 = 0$$

$$6y + 22 - y - 3 = 0$$

$$5y + 19 = 0$$

$$\underline{x} = 3 \cdot \left(-\frac{19}{5}\right) + 11 =$$

$$= -\frac{57}{5} + 11 = \underline{-\frac{2}{5}}$$

$$5y = -19$$

$$\underline{y = -\frac{19}{5}}$$

$$P\left(-\frac{2}{5}, -\frac{19}{5}\right)$$