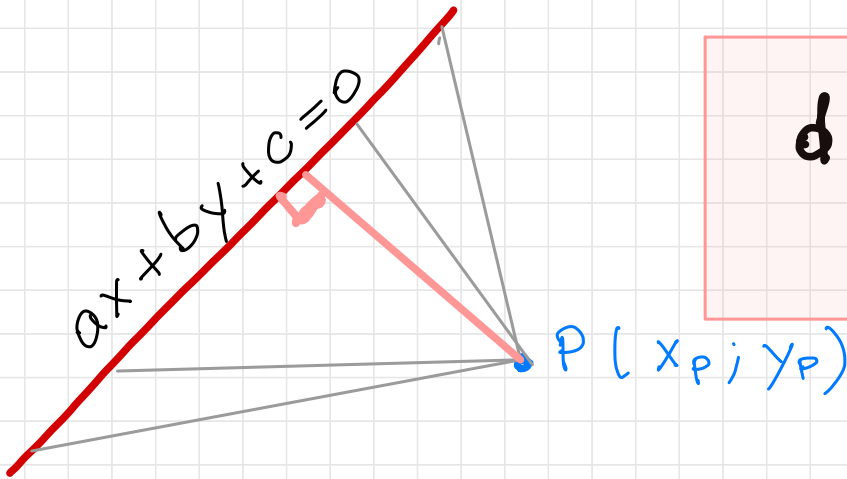


DISTANZA PUNTO-RETTA



SI USA LA FORMULA

$$d = \frac{|ax_p + by_p + c|}{\sqrt{a^2 + b^2}}$$

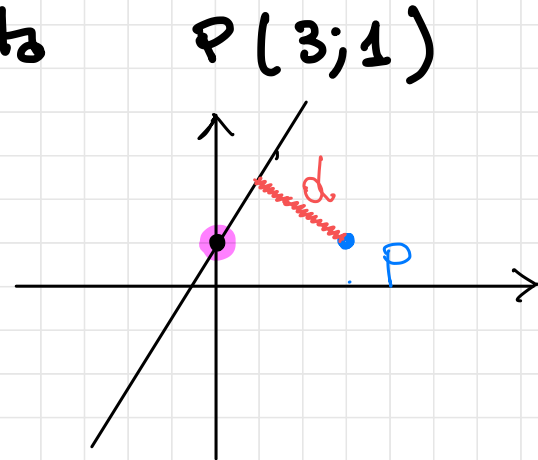


$$a=4 \quad b=-3 \quad c=+3$$

ESEMPIO: $4x - 3y + 3 = 0$ retta

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

$$d = \frac{|4 \cdot 3 - 3 \cdot 1 + 3|}{\sqrt{16 + 9}} = \frac{|12|}{5} = \frac{12}{5}$$



ESERCIZIO

Calcola la distanza del punto $P(0; 6)$ dalla retta che passa per i punti $A(2; 3)$ e $B\left(\frac{1}{2}; 1\right)$. $\left[\frac{17}{5}\right]$

RICAVO retta \overline{AB}

$$\frac{x - x_A}{x_B - x_A} = \frac{y - y_A}{y_B - y_A}$$

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

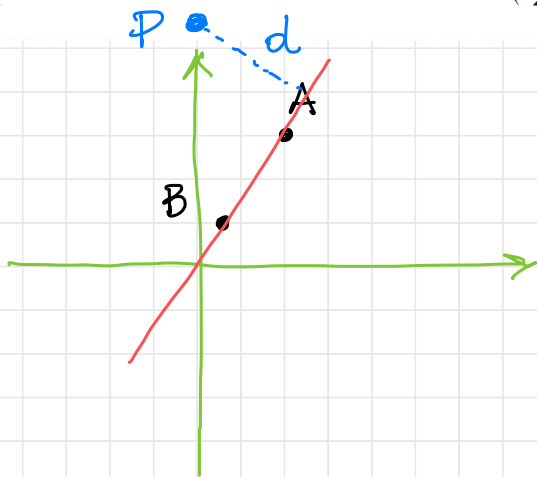
$$\frac{x - 2}{-\frac{3}{2}} = \frac{y - 3}{-2}$$

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

$$-2x + 4 = -\frac{3}{2}y + \frac{9}{2}$$

$$4x - 8 = 3y - 9 \rightarrow 4x - 3y + 1 = 0$$

$$a = 4 \quad b = -3 \quad c = +1$$



$$d = \frac{|4 \cdot 0 + (-3) \cdot 6 + 1|}{\sqrt{16 + 9}} = \frac{17}{5}$$