

$$(2k-2)x - 8ky + 2k+1 = 0$$

$$-8k = 0 \Rightarrow k = 0$$

$$y = \frac{1}{5}x + \frac{4}{5}$$

$$y = -x - 4$$

$$y = \frac{1}{5}x - \frac{2}{5}$$

$$y = -x - 2$$

$$\begin{cases} y = \frac{1}{5}x + \frac{4}{5} \\ y = -x - 4 \end{cases}$$

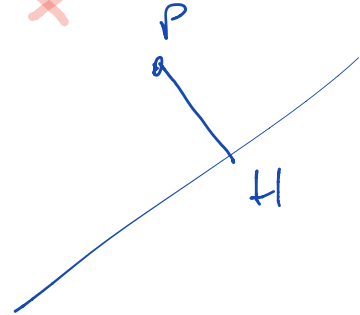
$$\frac{1}{5}x + \frac{4}{5} = -x - 4$$

$$x + 4 = -5x - 20$$

$$6x = -24 \Rightarrow \begin{cases} x = -4 \\ y = 0 \end{cases}$$

# Distanța punct-rectă

$$P(x_0, y_0) \quad \underline{a}x + \underline{b}y + \underline{c} = 0$$



$$\overline{PH} = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}}$$

$$P(3; -2) \quad 2x - 3y + 4 = 0$$

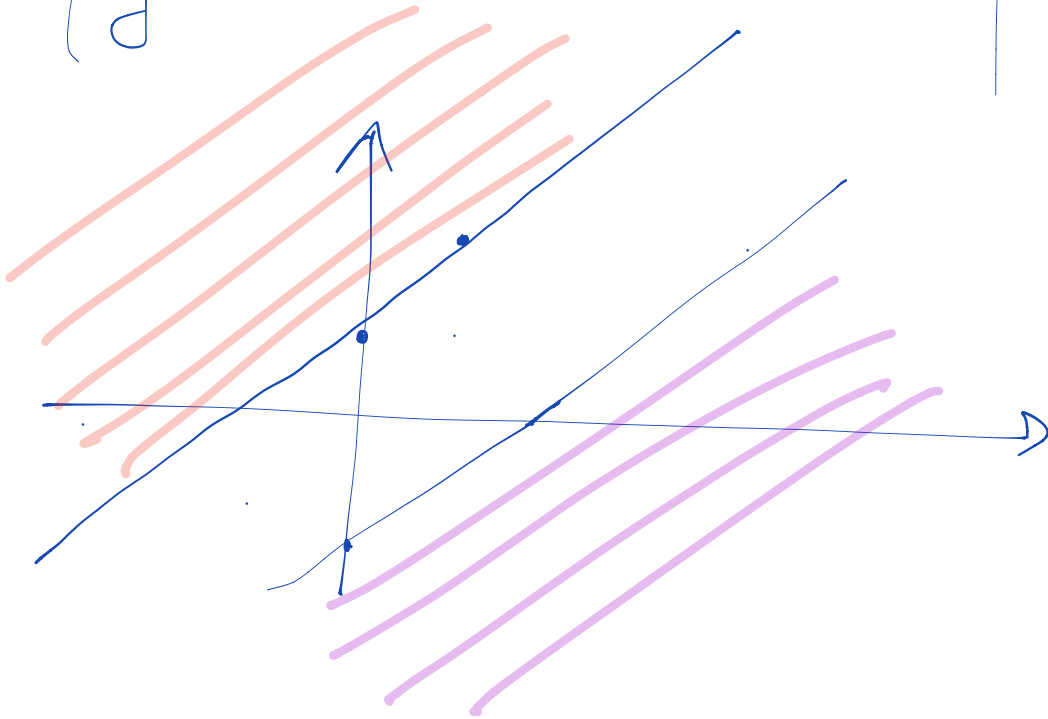
$$\begin{aligned} \overline{PH} &= \frac{|2 \cdot 3 + (-3) \cdot (-2) + 4|}{\sqrt{4 + 9}} \\ &= \frac{6 + 6 + 4}{\sqrt{13}} = \frac{16}{\sqrt{13}} = \frac{16\sqrt{13}}{13} \end{aligned}$$

# Parti del piano e delle rette

$$\begin{cases} y > x + 1 \\ y < x - 2 \end{cases} \quad \emptyset$$

x	y
0	1
1	2

x	y
0	-2
2	0



$$\underline{A.413} \quad A(1;0) \quad B(2k; k+1)$$

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

$$\frac{y - 0}{k+1 - 0} = \frac{x - 1}{2k - 1}$$

$$\frac{y}{k+1} = \frac{x - 1}{2k - 1}$$

$$(2k - 1)y = (k + 1)x - (k + 1)$$

$$(k + 1)x - (2k - 1)y - (k + 1) = 0$$

$$a) k + 1 = 0 \Rightarrow k = -1$$

$$b) -(2k - 1) = 0 \Rightarrow k = \frac{1}{2}$$

$$c) P(-1; 1)$$

$$(k + 1) \cdot (-1) - (2k - 1) \cdot 1 - (k + 1) = 0$$

$$-k-1-2k+x-k-x=0$$

$$-4k=1 \Rightarrow k=-1/4$$

$$d) m = \frac{\Delta y}{\Delta x} = \frac{-8+2}{3-5} = \frac{-6}{-2} = 3$$

$$m = -\frac{a}{b} = -\frac{(k+1)}{-(2k-1)} = \frac{k+1}{2k-1} //$$

$$\frac{k+1}{2k-1} \neq 3 \Rightarrow k+1=6k-3 \quad \text{con } k \neq 1/2$$

$$5k = +4 \Rightarrow k = +4/5$$

N. 429

$$A(3, 14) \quad B(5, 24) \quad C(6, 33) \quad D(-2, -7)$$

$$m_{AB} = \frac{24 - 14}{5 - 3} = \frac{10}{2} = 5$$

$$m_{BC} = \frac{33 - 24}{6 - 5} = 9$$

$$m_{CD} = \frac{-7 - 33}{-2 - 6} = \frac{-40}{-8} = 5$$

$$m_{AD} = \frac{-7 - 14}{-2 - 3} = \frac{-21}{-5} = \frac{21}{5}$$

$$d(B, r_{CD})$$

$$r_{CD}: \frac{y - y_D}{y_C - y_D} = \frac{x - x_D}{x_C - x_D}$$

$$\frac{y + 7}{33 + 7} = \frac{x + 2}{6 + 2} \Rightarrow \frac{y + 7}{40} = \frac{x + 2}{8}$$

$$y+7 = 5x+10$$

$$5x - y + 3 = 0$$

$$B(5, 24)$$

$$d = \frac{|5 \cdot 5 - 1(24) + 3|}{\sqrt{25+1}} =$$

$$= \frac{|25 - 24 + 3|}{\sqrt{26}} = \frac{4}{\sqrt{26}} = \frac{4\sqrt{26}}{26} = \frac{2\sqrt{26}}{13}$$

Abbott

Flatlandia