

10:35

A

kiväärö

16/16 P

1

A(2;1) ; B(10;2) ; C(7;3)

a) la droite (AB)

$$4p \vec{AB} = B - A = (8; 1) \rightarrow \vec{n}(-1; 8)$$

$$-1x + 8y + c = 0$$

$$A: (-1) \cdot 2 + 8 \cdot 1 + c = 0$$

$$-2 + 8 + c = 0$$

$$6 + c = 0$$

$$c = -6$$

$$-1x + 8y - 6 = 0 \quad / \cdot (-1)$$

$$\underline{\underline{x - 8y + 6 = 0}}$$

$$ou \quad k = \frac{y_B - y_A}{x_B - x_A} = \frac{2 - 1}{10 - 2} = \frac{1}{8}$$

$$y = \frac{1}{8}x + q$$

$$A: 1 = \frac{1}{8} \cdot \frac{2}{1} + q$$

$$1 - \frac{1}{4} = q$$

$$q = \frac{3}{4}$$

$$\underline{\underline{y = \frac{1}{8}x + \frac{3}{4}}}$$

b) médiatrice [AB]

$$4p \quad D = \frac{A+B}{2} = (6; \frac{3}{2})$$

(AB): (8; 1)

$$8x + 1y + c = 0$$

$$D: 8 \cdot 6 + 1 \cdot \frac{3}{2} + c = 0$$

$$48 + \frac{3}{2} + c = 0$$

$$c = -\frac{99}{2}$$

$$8x + 1y - \frac{99}{2} = 0 \quad / \cdot 2$$

$$\underline{\underline{16x + 2y - 99 = 0}}$$

c) l'angle : (AB) et $\pi: 2x + y - 7 = 0$

$$4p \quad x - 8y + 6 = 0 \quad \text{et} \quad 2x + y - 7 = 0$$

$$\vec{n}_1(1; -8)$$

$$\vec{n}_2(2; 1)$$

$$\cos \varphi = \frac{|1 \cdot 2 + (-8) \cdot 1|}{\sqrt{65} \cdot \sqrt{5}} = \frac{6}{5\sqrt{13}}$$

$$\vec{n}_1: \sqrt{1^2 + (-8)^2} = \sqrt{1+64} = \sqrt{65}$$

$$\vec{n}_2: \sqrt{2^2 + 1^2} = \sqrt{5}$$

$$= 70,56^\circ = 70^\circ 33'$$