

# Ejercicio 1

$$P_1 (4, 3)$$

$$P_2 (1, 7)$$

$$P_3 (-2, 2)$$

$$P_4 (1, -6)$$

Distancia 1.

$P_1, P_2$

$$P_1 P_2 = \sqrt{(1-4)^2 + (7-3)^2}$$

$$P_1 P_2 = \sqrt{(-3)^2 + (4)^2}$$

$$P_1 P_2 = \sqrt{(9) + (16)}$$

$$P_1 P_2 = \sqrt{25}$$

$$P_1 P_2 = \boxed{5}$$

Distancia 2

$P_2, P_3$

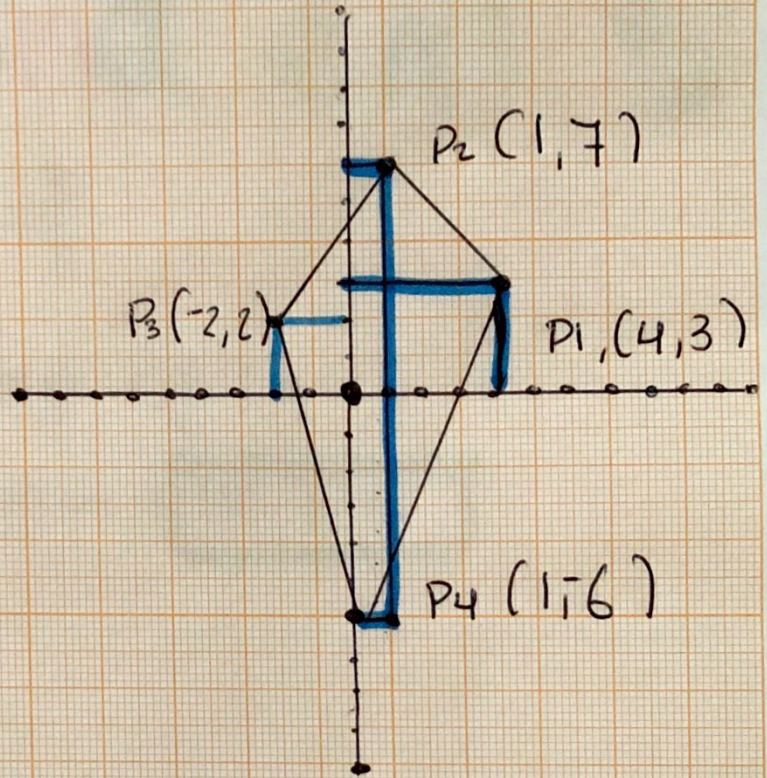
$$P_2 P_3 = \sqrt{(-2-1)^2 + (2-7)^2}$$

$$P_2 P_3 = \sqrt{(-3)^2 + (-5)^2}$$

$$P_2 P_3 = \sqrt{(9) + (25)}$$

$$P_2 P_3 = \sqrt{34}$$

$$P_2 P_3 = \boxed{5.83}$$



Distancia 3

$P_3, P_4$

$$P_3 P_4 = \sqrt{(1-(-2))^2 + (-6-2)^2}$$

$$P_3 P_4 = \sqrt{(3)^2 + (-8)^2}$$

$$P_3 P_4 = \sqrt{(9) + (64)}$$

$$P_3 P_4 = \sqrt{73}$$

$$P_3 P_4 = \boxed{8.54}$$

# Continuación Pendientes

$$m = \frac{y^2 - y^1}{x^2 - x^1} = \frac{3 - 6}{4 - 1} = \frac{-3}{3} = \frac{3}{3}$$

$$\theta = \arctan m = \arctan \left( \frac{3}{3} \right) =$$

$$\alpha = \arctan m = \boxed{45^\circ 0' 0''}$$

Pendiente 4

$$P_4 \begin{matrix} P_1 \\ x_1 y_1 \end{matrix} (1, 6)$$

$$P_1 \begin{matrix} x_2 y_2 \\ (4, 3) \end{matrix}$$

# Continuacion

Distancia 4

$P_4, P_1$

$$P_4, P_1 = \sqrt{(4-1)^2 + (3-(-6))^2}$$

$$P_4, P_1 = \sqrt{(3)^2 + (9)^2}$$

$$P_4, P_1 = \sqrt{(9) + (81)}$$

$$P_4, P_1 = \sqrt{90}$$

$$P_4, P_1 = \boxed{9.48}$$

$$\text{Total} = 28.85$$

$$P_4 (1, -6)$$

$$P_1 (4, 3)$$

Pendiente 1  $P_1, P_2$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{7 - 3}{1 - 4} = \frac{4}{-3} = -\frac{4}{3}$$

$$\theta = \arctan m = \arctan \left(-\frac{4}{3}\right) = 45^\circ 0' 0''$$

$$P_1 (4, 3)$$

$$P_2 (1, 7)$$

$$P_3 (-2, 2)$$

$$P_4 (1, -6)$$

Pendiente  $P_2, P_3$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 7}{-2 - 1} = \frac{-5}{-3} = \frac{5}{3}$$

$$\theta = \arctan m = \arctan \left(\frac{5}{3}\right) = 59^\circ 2' 10.48''$$

Pendiente 3  $P_3, P_4$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-6 - 2}{1 - (-2)} = \frac{-8}{3} = -\frac{8}{3}$$

$$\theta = \arctan m = \arctan \left(-\frac{8}{3}\right) = 69^\circ 26' 38.24''$$

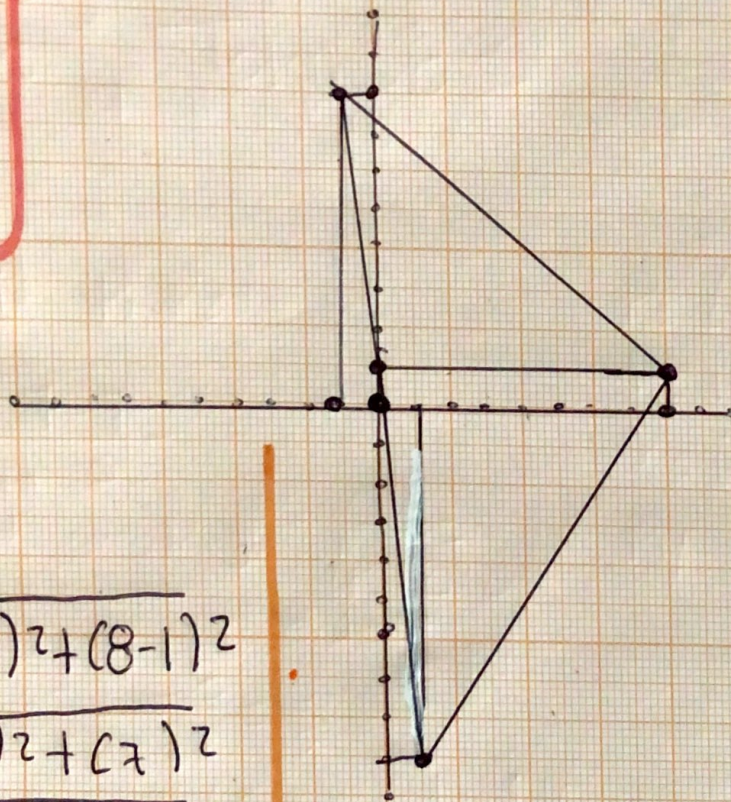
# Ejercicio 2

- Graficar los puntos de la figura
- Calcular los lados de cada lado de la figura y el perímetro de la misma
- Calcular la pendiente (pendiente) y el ángulo de indicación de cada vector.

$$P_1 (8, 7)$$

$$P_2 (-1, 8)$$

$$P_3 (7, -8)$$



Distancias

$P_1 P_2$

$$P_1 P_2 = \sqrt{(-1-8)^2 + (8-7)^2}$$

$$P_1 P_2 = \sqrt{(-9)^2 + (1)^2}$$

$$P_1 P_2 = \sqrt{81 + 1}$$

$$P_1 P_2 = \sqrt{82}$$

$$P_1 P_2 = 9.06$$