



UNIVERSIDAD DEL SURESTE

# GEOMETRIA ANALITICA

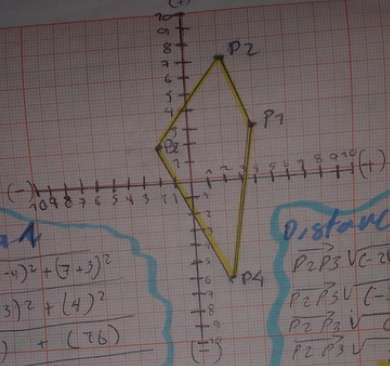
**Nombre del alumno: Itzel Abigail Tlamani Lopez**

**Nombre del Profesor: Ing. Jorge Enrique Albores**

**Submódulo I y II**

**Grado: segundo de Bachillerato**

**Actividad I**



**Distancia 1**

$$P1 P2 \sqrt{(7-1)^2 + (2-7)^2}$$

$$P1 P3 \sqrt{(7-(-3))^2 + (2-4)^2}$$

$$P1 P4 \sqrt{(7-9)^2 + (2-(-2))^2}$$

$$P1 P2 = 5$$

**Distancia 2**

$$P2 P3 \sqrt{(-3-1)^2 + (4-7)^2}$$

$$P2 P4 \sqrt{(-3-9)^2 + (4-(-2))^2}$$

$$P2 P3 = 5.83$$

**Distancia 3**

$$P3 P1 \sqrt{(1-(-3))^2 + (7-4)^2}$$

$$P3 P4 \sqrt{(-3-9)^2 + (4-(-2))^2}$$

$$P3 P1 = 8.04$$

$$\begin{array}{r} 50 \\ 5083 \\ + 8054 \\ \hline 9048 \\ \hline 28085 \end{array}$$

**Distancia 4**

$$P4 P1 \sqrt{(7-9)^2 + (2-(-2))^2}$$

$$P4 P2 \sqrt{(1-9)^2 + (7-(-2))^2}$$

$$P4 P1 = 9.88$$

**Pendientes**

**Pendiente 1**  $m = \frac{y2-y1}{x2-x1} = \frac{7-3}{1-5} = \frac{4}{-4} = -1$

$\theta = \arctang m = \arctang (-1) = 53^\circ 7' 48.57''$

**Pendiente 2**  $m = \frac{y2-y1}{x2-x1} = \frac{2-7}{-2-7} = \frac{-5}{-9} = \frac{5}{9}$

$\theta = \arctang m = \arctang (\frac{5}{9}) = 59^\circ 2' 10.48''$

**Pendiente 3**  $m = \frac{y2-y1}{x2-x1} = \frac{-6-2}{1-(-1)} = \frac{-8}{2} = -4$

$\theta = \arctang m = \arctang (-4) = 81^\circ 26' 38.29''$

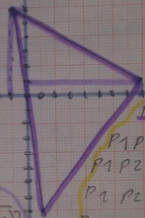
**Pendiente 4**  $m = \frac{y2-y1}{x2-x1} = \frac{-6-2}{1-(-2)} = \frac{-8}{-3} = \frac{8}{3}$

$\theta = \arctang m = \arctang (\frac{8}{3}) = 69^\circ 26' 38.24''$

# Actividad 2

- Clasifica los puntos de la figura
- Calcula los lados de la figura y el perímetro de la misma
- Calcula la pendiente y el ángulo

$P_1(8, 1)$   
 $P_2(-1, 8)$   
 $P_3(1, -8)$



## distancia.

P1 P2

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

$$P_1 P_2 = \sqrt{(-9)^2 + (7)^2}$$

$$P_1 P_2 = \sqrt{81 + 49}$$

$$P_1 P_2 = \sqrt{130}$$

$$P_1 P_2 = 11.40$$

$$11.40$$

$$16.12$$

$$11.40$$

$$38.92$$

perímetro

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

$$P_1 P_2 = \sqrt{(-9)^2 + (7)^2}$$

$$P_1 P_2 = \sqrt{81 + 49}$$

$$P_1 P_2 = \sqrt{130}$$

$$P_1 P_2 = 11.412$$

P3 P1

$$P_3 P_1 = \sqrt{(8-1)^2 + (1-(-8))^2}$$

$$P_3 P_1 = \sqrt{7^2 + (9)^2}$$

$$P_3 P_1 = \sqrt{49 + 81}$$

$$P_3 P_1 = \sqrt{130}$$

$$P_3 P_1 = 11.40$$

# pendientes

$$P_1 P_2 \quad m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{8 - 1}{-1 - 8} = \frac{7}{-9}$$

$$\theta = \arctan m = \arctan \left( \frac{7}{-9} \right)$$

$$370 \ 52' \ 29.046''$$

## pendiente 2

$$P_2 P_3 = \frac{-8 - 8}{1 - (-1)} = \frac{-16}{2} = \frac{-16}{2}$$

$$\theta = \arctan m = \arctan \left( \frac{-16}{2} \right)$$

## pendiente 3

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - (-8)}{8 - 1} = \frac{9}{7}$$

$$\theta = \arctan m = \arctan \left( \frac{9}{7} \right) = 57^\circ 7' 30.06''$$

$$57^\circ 7' 30.06''$$