UDS

Mi Universidad

IMAJENES

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Nombre del tema : Problemario

Parcial : 2

Nombre de la Materia : Geometría analítica

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Nombre de la Licenciatura : Técnico en enfermería

Tercer Semestre

1: Vertices son : A(-8,3) B(-1,5) C(7,-1) y D(-2,-6).

$$A = \frac{1}{2} \begin{vmatrix} -8, & 3 \\ -1, & 5 \\ 7, & -1 \\ -2, & -6 \\ -8, & 3 \end{vmatrix}$$

$\frac{1}{2} (-90+1-42-6)-(48+2+35-3)$

$\frac{1}{2} (-87)-(82)$

$\frac{1}{2} (-169)$

$D = \sqrt{(x_2-x_1)^2 + (y_2-y_1)^2}$ $\qquad D_{BC} = \sqrt{64+36}$

$D_{AB} = \sqrt{81 + 64}$ $\Big\}$ 6.02 $\qquad D_{BC} = \sqrt{100} = 10$ $\Big\}$ = 5

$D_{AB} = \sqrt{145} = 12.04$ $\qquad D_{CD} = \sqrt{81 + 25}$ $\Big\}$ 5.14

$D_{DA} = \sqrt{36 + 81}$ $\Big\}$ 5.4 $\qquad D_{CD} = \sqrt{106} = 10.29$

$D_{DA} = \sqrt{117} = 10.81$

2.- Vertices son: A(1,5) B(-4,+6) C(-8,-2)

$$x = \frac{x_1 + r\, x_2}{1 + r} \qquad y = \frac{y_1 + r\, y_2}{1 + r}$$

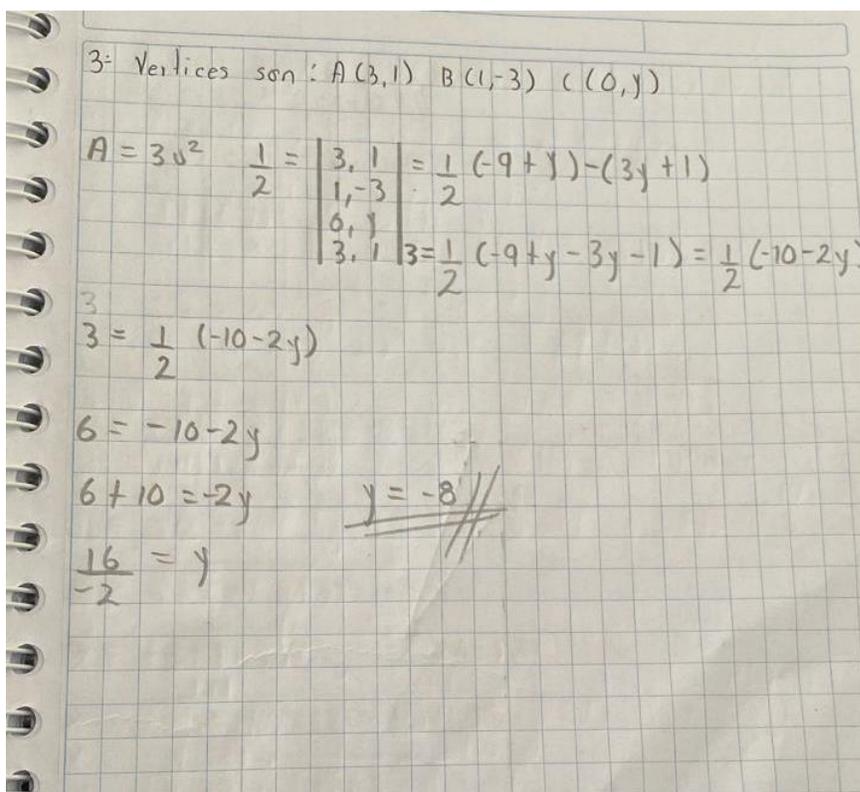$$x = \frac{-1 + 1(-4)}{1+1} \qquad y = \frac{5 + 1(+6)}{1+1} \right\} = -2.5, -0.5 \;\; PM_{AB}$$

$$x = \frac{-5}{2} = -2.5 \qquad y = \frac{-1}{2} = -0.5$$

$$x = \frac{-4 + 1(-8)}{1+1} \qquad y = \frac{-6 + 1(-2)}{2} \right\} = -6, -4 \;\; PM_{BC}$$

$$x = \frac{-12}{2} = -6 \qquad y = \frac{-8}{2} = -4$$

$$x = \frac{-8 + 1(-1)}{1+1} \qquad y = \frac{-2 + 1(5)}{1+1} \right\} = -4.5, \; 1.5 \;\; PM_{CA}$$

$$x = \frac{-9}{2} = -4.5 \qquad y = \frac{3}{2} = 1.5$$

3- Vertices son : A (3,1) B (1,-3) C (0,y)

$$A = 3u^2 \qquad \frac{1}{2} = \begin{vmatrix} 3, & 1 \\ 1, & -3 \\ 0, & 1 \\ 3, & 1 \end{vmatrix} = \frac{1}{2}(-9+y)-(3y+1)$$

$$3 = \frac{1}{2}(-9+y-3y-1) = \frac{1}{2}(-10-2y)$$

$$3 = \frac{1}{2}(-10-2y)$$

$$6 = -10-2y$$

$$6+10 = -2y \qquad y = -8 \; /\!/$$

$$\frac{16}{-2} = y$$

1° A (0,0) B (1,2) y C (3-4)

$$A = \frac{1}{2} \begin{vmatrix} 0,0 \\ 1,2 \\ 3,-4 \\ 0,0 \end{vmatrix} = \frac{1}{2}(0-4-0)-(0+6+0)$$

$$= \frac{1}{2}(-4)-(6) = -10$$

$D_{AB} = \sqrt{1+4} = 2.23$

$D_{BC} = \sqrt{4+36} = 6.32$

$D_{CA} = \sqrt{9+16} = 5$

$S = \frac{a+b+c}{2}$

$S = \frac{2.23+6.32+5}{2} = 6.77$

$A = \sqrt{S(s-a)(s-b)(s-c)}$

$A = \sqrt{6.77(6.77-2.44)(6.77-6.32)(6.77-5)}$

$A = \sqrt{6.77(4.33)(0.45)(1.77)}$

23.34   4.83

5. $A(-3,3)$ $B(4,2)$ $C(7,7)$ $D(-1,6)$

$$A = \frac{1}{2}\begin{vmatrix} -3,3 \\ 4,2 \\ 7,7 \\ -1,6 \end{vmatrix} = \frac{1}{2}(-6+28+36)-(-7+14+12)$$

$$\frac{1}{2}(58)-(40)$$

$$\frac{1}{2}(98)$$

$D \sqrt{(x_2-x_1)^2 + (y_2-y_1)^2}$

$D_{AB} = \sqrt{1+1}$

$D_{AB} = \sqrt{2}$ 1.4 } 0.7 SP

$D_{BC} = \sqrt{121+81}$

$D_{BC} = \sqrt{202} = 14.2$ } 7.1 SP

$D_{CD} = \sqrt{36+169}$

$D_{CD} = \sqrt{205} = 14.3$ } 7.15 SP

$D_{DA} = \sqrt{4+81}$

$D_{DA} = \sqrt{85} = 9.2$ } 4.6 SP

6. A(0,0) B(1,2) C(3,-4)

$$A = \frac{1}{2} \begin{vmatrix} 0,0 \\ 3,-4 \\ 1,2 \\ 0 0 \end{vmatrix} = \frac{1}{2} (-4)-(6)$$

$$\frac{1}{2} (-10)$$

$S = a+b+c$

$S = \dfrac{6.32 + 5 + 2.2}{2}$

$S = 6.76$

$A = \sqrt{6.76} \ (6.76-6.32)(6.76-5)(6.76-2.2)$

$A = \sqrt{6.76} \ (0.44)(1.76)(4.56)$

$A = \sqrt{23.8}$ $A = 4.88$

hallar la pendiente y el angulo de inclinación de la recta
que une los puntos A (12,-5) B (2,1).

$$m = \frac{1-(-5)}{2-12} = \frac{6}{-10} \qquad M = -0.6$$

$$\Theta = TAN^{-1}(-0.6) \quad | \quad \Theta = -30.9°$$

A (3,-6)   B (11,-5)   C (9,1)   D (1,1)

$$m = \frac{-5-(-6)}{11-3} = \frac{1}{8} = 0.1$$

$$m = \frac{2-1}{9-1} = \frac{1}{8} = 0.1$$

$$m = \frac{1-(-6)}{1-3} = \frac{7}{-2} = -3.5$$

$$m = \frac{2-(-5)}{9-11} = \frac{7}{-2} = -3.5$$

Si son paralelogramos.