

MATERIA

ALUMNO : MIGUEL ÁNGEL PÉREZ MONTEJO.

MAESTRO : JUAN JOSÉ OJEDA

MATERIA : GEOMETRÍA ANALÍTICA.

TRABAJO : PROBLEMATARIO

1

169
175

$$A(-8, 3) \quad B(-1, 5) \quad C(7, -1) \quad D(-2, -6)$$

$$A = \frac{1}{2} \begin{vmatrix} -8 & 3 \\ -1 & 5 \\ 7 & -1 \\ -2 & -6 \\ -8 & 3 \end{vmatrix} = \frac{1}{2} (-40 + 1 - 42 - 6) - (48 + 2 + 35 - 3)$$

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

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

$$= \frac{-169}{2} = -84.5$$

$$A = -84.5 \text{ u}^2$$

$$DAB = \sqrt{(-1+8)^2 + (5-3)^2}$$

$$DAB = \sqrt{49 + 4}$$

$$DAB = 7.2$$

$$DBC = \sqrt{(7+1)^2 + (-1-5)^2}$$

$$DBC = \sqrt{64 + 16}$$

$$DBC = 8.9$$

$$D = \sqrt{(x^2 - x^1)^2 + (y^2 - y^1)^2}$$

$$DCD = \sqrt{(2-7)^2 + (-6+1)^2}$$

$$DCD = \sqrt{81 + 25}$$

$$DCD = 10.2$$

$$DDA = \sqrt{(-8+2)^2 + (3+6)^2}$$

$$DDA = \sqrt{36 + 81}$$

$$DDA = 10.8$$

$$\text{AREA} = 84.5 \text{ u}^2 \quad \text{PERIMETRO} = 37.1$$

$$\text{SEMI PERIMETRO} = 18.55$$

2

$$P_{CM} = \frac{x_2 + x_1}{2}$$

$$P_{CM} = \frac{y_2 + y_1}{2}$$

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

$$A = (-1, 5)$$

$$B = (-4, -6)$$

$$C = (-8, -2)$$

$$P_{CMx} = \frac{-4 - 1}{2} = -2.5 \quad A-B$$

$$P_{CMx} = \frac{-8 - 4}{2} = -6 \quad B-C$$

$$P_{CMx} = \frac{-8 - 8}{2} = -4.5 \quad C-A$$

$$P_{CMy} = \frac{-6 + 5}{2} = -0.5 \quad A-B$$

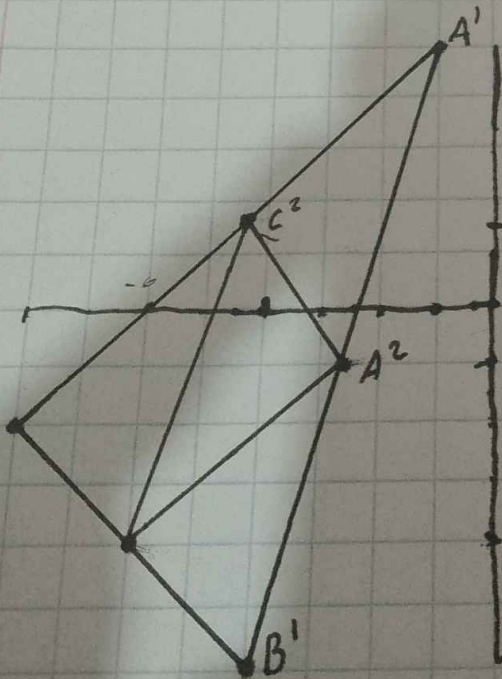
$$P_{CMy} = \frac{-2 - 6}{2} = -4 \quad B-C$$

$$P_{CMy} = \frac{5 - 2}{2} = 1.5 \quad C-A$$

$$A^2 = (-2.5, -1)$$

$$B^2 = (-6, -4)$$

$$C^2 = (-4.5, 1.5)$$



$$A = (-3, 3) \quad B = (4, 2) \quad C = (7, 7) \quad D = (-1, 6)$$

$$A = \frac{1}{2} \begin{vmatrix} -3 & 3 \\ 4 & 2 \\ 7 & 7 \\ -1 & 6 \\ -3 & 3 \end{vmatrix} = \frac{1}{2} (-6 + 28 + 42 - 3) - (-18 - 7 + 14 + 12)$$

$$A = \frac{1}{2} (61 - 1)$$

$$A = 30 \text{ u}^2$$

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

$$DCD = \sqrt{(-1-7)^2 + (6-7)^2}$$

$$DCD = 8.06$$

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

$$DAB = \sqrt{49 + 1}$$

$$DAB = 7.07$$

$$DDA = \sqrt{(-3+1)^2 + (3-6)^2}$$

$$DDA = 3.60$$

$$DBC = \sqrt{(7-4)^2 + (7-2)^2}$$

$$DBC = 5.83$$

$$\text{AREA} = 30 \text{ u}^2$$

$$\text{PERIMETRO} = 24.56$$

$$\text{SEMI PERIMETRO} = 12.28$$

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

$$A = \frac{1}{2} \begin{vmatrix} -3 & 3 \\ 4 & 2 \\ 7 & 7 \\ -1 & 6 \\ -3 & 3 \end{vmatrix} = \frac{1}{2} (-6 + 28 + 42 - 3) - (-18 - 7 + 14 + 12)$$

$$A = \frac{1}{2} (61 - 1)$$

$$A = 30 \text{ u}^2$$

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

$$DCD = \sqrt{(-1-7)^2 + (6-7)^2}$$

$$DCD = 8.06$$

$$DAB = \sqrt{(4+3)^2 + (2-5)^2}$$

$$DAB = \sqrt{49 + 9}$$

$$DAB = 7.07$$

$$DDA = \sqrt{(-1+1)^2 + (3-6)^2}$$

$$DDA = 3.60$$

$$DBC = \sqrt{(7-4)^2 + (7-2)^2}$$

$$DBC = 5.83$$

$$\text{AREA} = 30 \text{ u}^2$$

$$\text{PERIMETRO} = 24.56$$

$$\text{SEMI PERIMETRO} = 12.28$$

$$A = (0, 0) \quad B(1, 2) \quad C(3, -4)$$

$$A = \frac{1}{2} \begin{vmatrix} 0 & 0 \\ 1 & 2 \\ 3 & -4 \\ 0 & 0 \end{vmatrix} = \frac{1}{2}(-4) - (6) \quad \text{AREA} = 5$$

$$\frac{1}{2} = -10$$

$$A = -5$$

$$DAB = \sqrt{(1-0)^2 + (2-0)^2}$$

$$DAB = 2.23$$

$$DBC = \sqrt{(3-1)^2 + (-4-2)^2}$$

$$DBC = 6.32$$

$$S = 6.775$$

$$DCA = \sqrt{(0-3)^2 + (0+4)^2}$$

$$DCA = 5$$

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

$$A = \sqrt{6.775(6.775-2.23)(6.775-6.32)(6.775-5)}$$

$$A = \sqrt{6.775(4.545)(0.455)(1.775)}$$

30.79

$$A = \sqrt{24.84}$$

$$A = 4.98$$

$$A = (0, 0) \quad B(1, 2) \quad C(3, -4)$$

$$\begin{vmatrix} 1 & 0 \\ 1 & 2 \\ 3 & -4 \\ 0 & 0 \end{vmatrix} = \frac{1}{2}(-4) - (6) \quad \text{AREA} = 5$$

$$\frac{1}{2} = -10$$

$$A = -5$$

$$DB = \sqrt{(1-0)^2 + (2-0)^2}$$

$$DB = 2.23$$

$$DC = \sqrt{(3-1)^2 + (-4-2)^2}$$

$$DC = 6.32$$

$$S = 6.775$$

$$DA = \sqrt{(0-3)^2 + (0+4)^2}$$

$$DA = 5$$

$$A = \sqrt{(S-A)(S-B)(S-C)(S-D)}$$

$$A = \sqrt{(6.775)(6.775-2.23)(6.775-6.32)(6.775-5)}$$

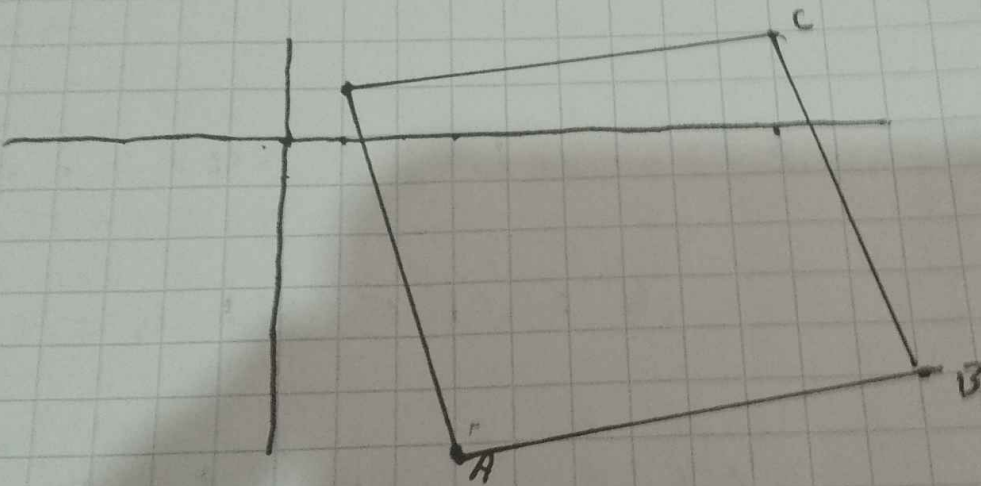
$$A = \sqrt{(6.775)(4.545)(0.455)(1.775)}$$

$$A = \sqrt{24.84}$$

$$A = 4.98$$

7

$A = (3, -6)$ $B = (11, -5)$ $C = (9, 2)$ $D = (1, 1)$



8

$$x^2 - y = 0$$

$$x = 0 \quad y = 0$$

$$-y = 0$$

$$y = 0$$

$$x^2 = 0$$

Sust

$$x = -x$$

$$(-x)^2 - y = 0$$

$$x^2 - y = 0$$

Sust

$$y = -y$$

$$-x^2 - (-y) = 0$$

$$-x^2 + y = 0$$

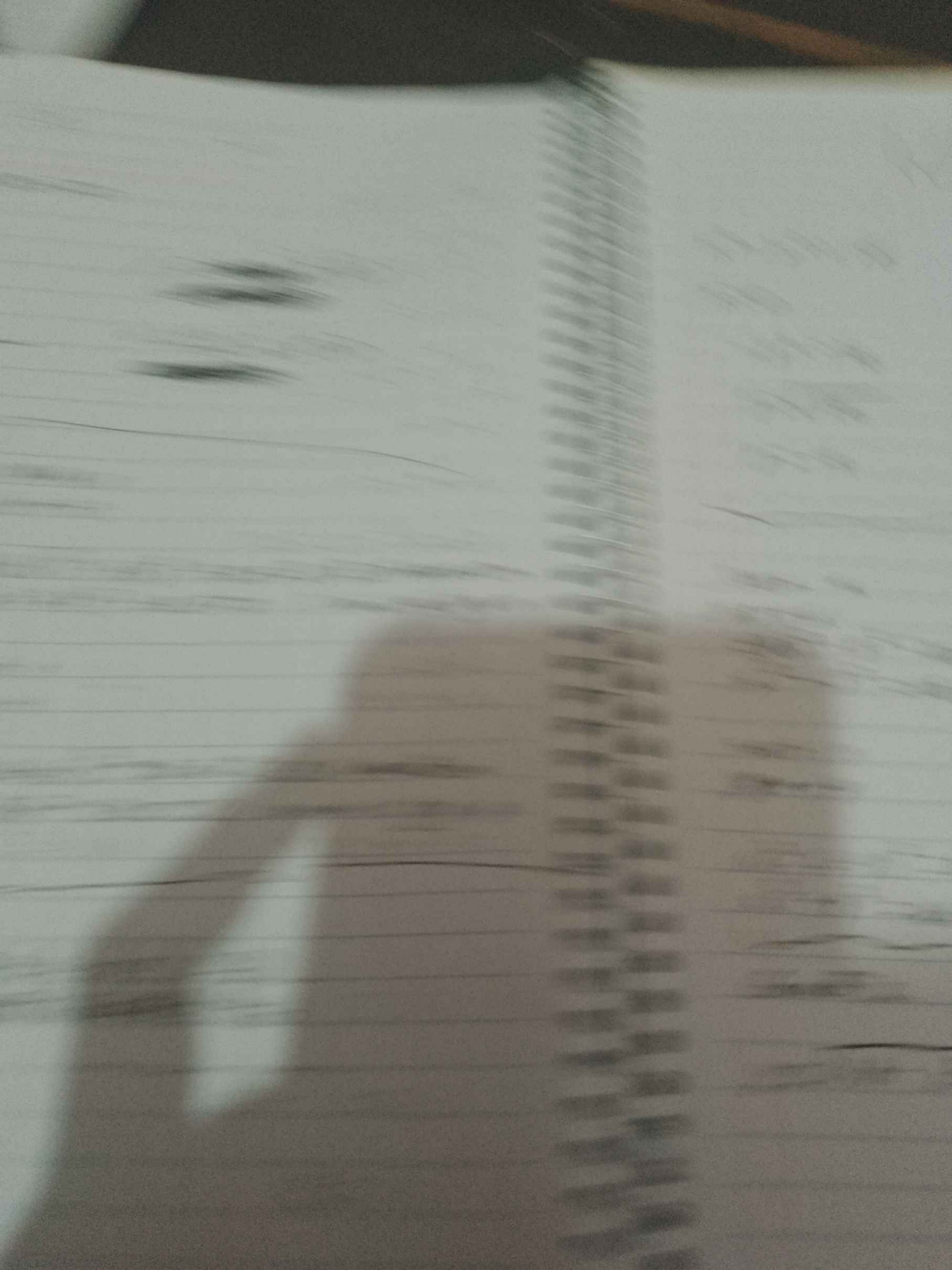
Si ES Simetrico el eje x

NO Es simetrico el eje y

$x = -3$	-2	-1	0	1	2	3
-3	-2	-1	0	1	2	3

$$y = \sqrt{-3^2}$$

$$y = -3$$



10

$$x^2 - y^2 = 16$$

$$x = 0$$

$$-y^2 = 16$$

$$y = \sqrt{16}$$

$$y = -4$$

$$y = 0$$

$$x^2 = 16$$

$$x = \sqrt{16}$$

$$x = 4$$

sust x

$$x = -x$$

$$(-x)^2 - y^2 = 16$$

$$x^2 - y^2 = 16$$

si es simetrico al eje x

sust y

$$x = -y$$

$$x^2 - (-y)^2 = 16$$

$$x^2 - y^2 = 16$$

si es simetrico al eje y .

Gráfico.

$$y = \sqrt{16 - x^2}$$

$x =$	-3	-2	-1	0	1	2	3
	7	12	15	16	15	12	7