SEMANA 4

TRIGONOMETRÍA

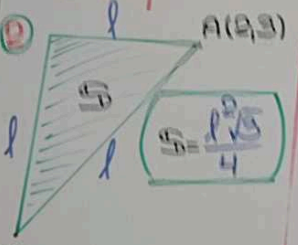
1 $A(x+3; y-4)$

$B(x+7; y-7)$

$\overline{AB}^2 = (-4)^2 + (3)^2$

$\overline{AB} = 5$

2



$S = \frac{l^2\sqrt{3}}{4}$

$B(-6,-3)$

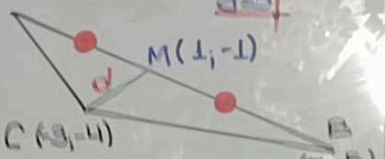
$l^2 = (8)^2 + (6)^2$

$l^2 = 100$

$S = \frac{100\sqrt{3}}{4}$

$\therefore S = 25\sqrt{3}$

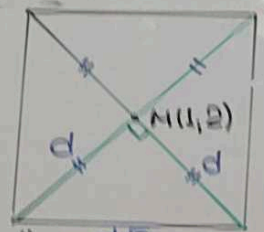
3



$d^2 = 4^2 + 3^2$

$d = 5$

4



$d^2 = 3^2 + 1^2 \rightarrow d^2 = 10$

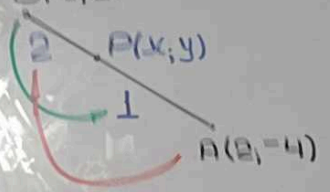
$S = (d\sqrt{2})^2$

$= 2d^2$

$= 20$

$\therefore S = 20$

5 $B(-1,2)$

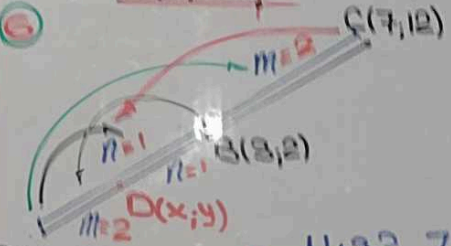


$x = \frac{(-1)(1) + 2(2)}{3} \rightarrow x = 1$

$y = \frac{(2)(1) + (-4)(2)}{3} \rightarrow y = -2$

$\therefore P(1,-2)$

6



$A(1,-3)$

$3 = \frac{1.m + 7.n}{m+n}$

$3m + 3n = m + 7n$

$m = 2n$

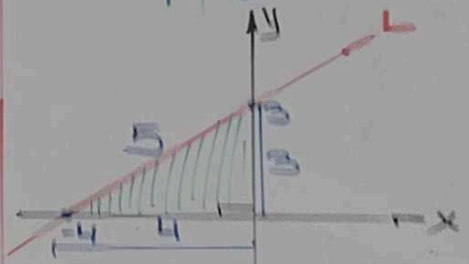
$x = \frac{1.1 + 3.2}{3} = \frac{7}{3}$

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

$\therefore D\left(\frac{7}{3}; \frac{1}{3}\right)$

7 $L: 3x - 4y + 12 = 0$

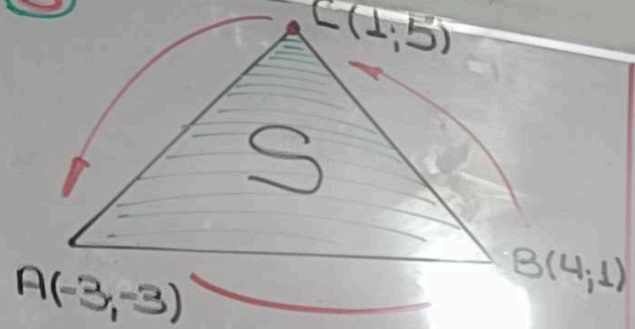
x	y
0	3
-4	0



PERÍMETRO $= 3 + 4 + 5$

$= 12$

8

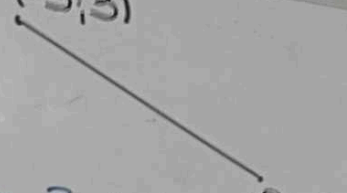


-15	-3	-3	-3
-12	4	1	-3
1	1	5	20
-26			14

$S = \frac{1}{2}|40|$

$\therefore S = 20$

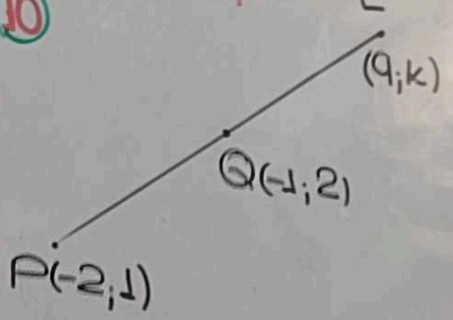
9



$m = \frac{3-(-1)}{-5-2}$

$m = -\frac{4}{7}$

10

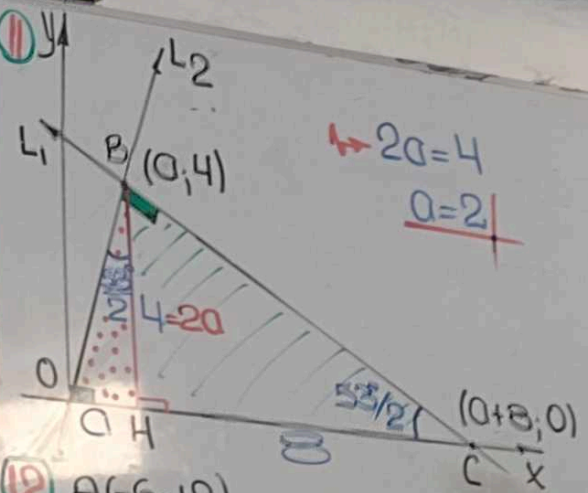


$m = \frac{2-1}{-1-(-2)} = \frac{K-2}{9-(-1)}$

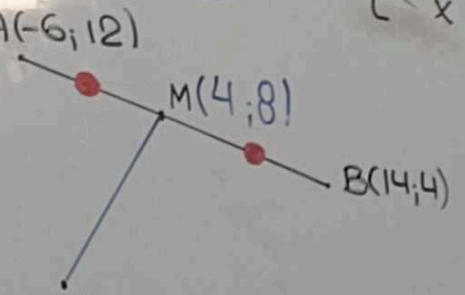
$1 = \frac{K-2}{10}$

$K = 12$

11



12



$m = \frac{8-0}{4-0}$

$m = 2$

SEMANA 4

TRIGONOMETRÍA

14 $(-8;0)$; $(0;-6)$

x_0 y_0

$m = \frac{0-(-6)}{-8-0} = \frac{6}{-8}$

$m = -\frac{3}{4}$

$y - y_0 = m(x - x_0)$

$y - 0 = -\frac{3}{4}(x+8)$

$4y = -3x - 24$

$3x + 4y + 24 = 0$

16

$Ax + By + C = 0 \rightarrow m = -\frac{A}{B}$

$L_1 \perp L_2 : m_1 \cdot m_2 = -1$

$L_1 : 2x + ay + 6 = 0 \rightarrow m_1 = -\frac{2}{a}$

$L_2 : -3x + (2a-1)y + 2 = 0$

$\rightarrow m_2 = -\frac{-3}{2a-1}$

$m_1 \cdot m_2 = -1$

$\left(-\frac{2}{a}\right)\cdot\left(\frac{3}{2a-1}\right) = -1$

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

$6 = a(2a-1)$

$a = 2$

$\therefore m_2 = \frac{3}{2(2)-1} = \frac{1}{4}$

17

$L: x - 2y + 6 = 0$

$L_1 : (3x + y - 17 = 0) \times 2$

$6x + 2y - 34 = 0$ +

$x - 2y + 6 = 0$

$7x - 28 = 0$

$x = 4$

$y = 5$

x_0 y_0

$P(4;5)$

$L_2 : 3x - y - 9 = 0 \rightarrow m_2 = 3$

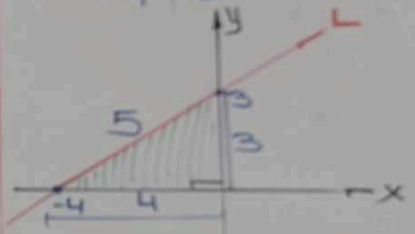
$y - 5 = 3(x-4)$

$y - 5 = 3x - 12$

$3x - y - 7 = 0$

7 $L: 3x - 4y + 12 = 0$

x	y
0	3
-4	0



PERÍMETRO = 3 + 4 + 5

= 12

8

-15 -

-12 -

1 -

-26