

SEMANA 5  
TRIGONOMETRIA

49  $\csc\left(\frac{3\pi}{4}\right) = \csc\frac{\pi}{4}$   
 $\frac{\pi - \frac{\pi}{4}}{\pi}$

50 RECTO C:  $C = 90^\circ$   
 $A + B = 90^\circ$

$M = (\text{SENA} + \text{COSA})^2 + (\frac{\text{COSB} - \text{SENB}}{\text{SENA} \text{ COSA}})^2$

$M = 2(\text{SEN}^2 A + \text{COS}^2 A)$

$\therefore M = 2$

51  $P = \text{SEN}^2(a+b) \rightarrow \text{SEN}(a+b) \cdot \text{COSA} \cdot \text{SENB} + \text{SEN}^2 b$

$P = \text{SEN}(a+b) [\text{SEN}(a+b) - 2\text{COSA} \cdot \text{SENB}] + \text{SEN}^2 b$   
 $\text{Sa.Cb} + \text{Ca.Sb}$

$\text{Sa.Cb} - \text{Ca.Sb}$   
 $\text{SEN}(a-b)$

$P = \text{SEN}^2 a - \text{SEN}^2 b + \text{SEN}^2 b$

$P = \text{SEN}^2 a$

52  $A = \frac{\text{SEN}^3 x + \text{COS}^3 x}{\text{SEN} x + \text{COS} x} + \frac{1}{2} \text{SEN} 2x$

$A = \frac{(\text{SEN} x + \text{COS} x)(1 - \text{SEN} x \text{ COS} x)}{\text{SEN} x + \text{COS} x} + \frac{1}{2} 2 \text{SEN} x \text{ COS} x$

$A = 1$

53  $\frac{W + \text{COS} \beta}{1 + \text{SEN} \beta} = W$   
 $W + \text{COS} \beta = W + W \text{SEN} \beta$

$(\text{COT} \beta = W)$

PIDEN:

$E = \frac{\text{COS} \beta - \text{SEN} \beta}{\text{SEN} \beta + \text{COS} \beta}$

$E = \frac{\text{COT} \beta - 1}{1 + \text{COT} \beta}$

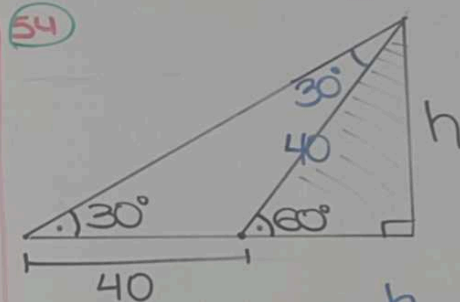
$\therefore E = \frac{W - 1}{W + 1}$

39 L:  $y = -x - 2 \rightarrow m = -1$

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

$y - 3 = -1(x - 0)$

$y = -x + 3$



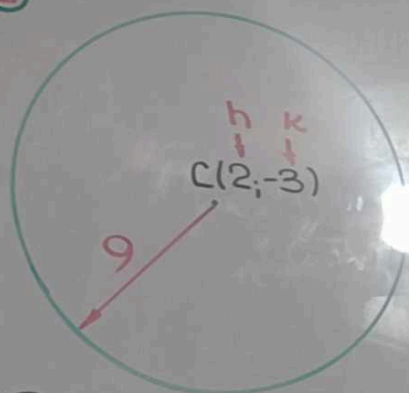
$\text{SEN} 60^\circ = \frac{h}{40}$

$\frac{\sqrt{3}}{2} = \frac{h}{40}$

$\therefore h = 20\sqrt{3}$

$$m = -1$$

①



$$C: (x-h)^2 + (y-k)^2 = R^2$$

$$(x-2)^2 + (y+3)^2 = 9$$

$$x^2 - 4x + 4 + y^2 + 6y + 9 = 9$$

$$x^2 + y^2 - 4x + 6y - 68 = 0$$

②  $x^2 + y^2 - 4x + 6y + 4 = 0$

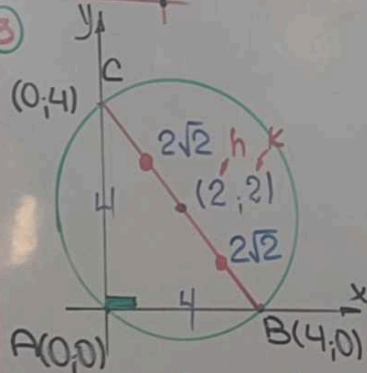
$$h = -\frac{-4}{2} \rightarrow h = 2$$

$$k = -\frac{6}{2} \rightarrow k = -3$$

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

$$R = 3$$

③



$$C: (x-2)^2 + (y-2)^2 = 8$$

④  $C_1: (x-2)^2 + (y+3)^2 = 4$

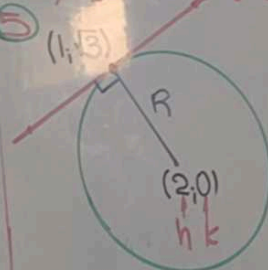
$$C_2: (x-2)^2 + (y+3)^2 = R^2$$

$$(4, 2) \in C_2: (4-2)^2 + (2+3)^2 = R^2$$

$$(R^2 = 29)$$

$$\therefore C_2: (x-2)^2 + (y+3)^2 = 29$$

⑤

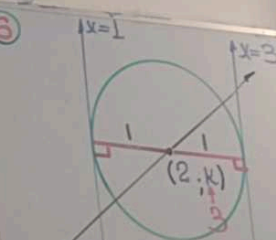


$$R^2 = (-1)^2 + (3)^2$$

$$(R^2 = 4)$$

$$C: (x-2)^2 + y^2 = 4$$

⑥



$$y = \frac{3}{2}x$$

$$k = \frac{3(2)}{2} \rightarrow k = 3$$

$$C: (x-2)^2 + (y-3)^2 = 1$$