Nombre del alumno: Oliver Fernando Rodas Hernández.

Nombre del Profesor: Arq. Pedro Alberto García López

Nombre del trabajo: Cortes de Departamentos.

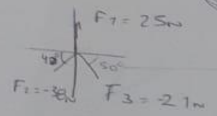
Asignatura: **RESISTENCIA DE MATERIALES DE CONSTRUCCION**

Grado: 4 cuatrimestre. Grupo: Arquitectura

Comitán de Domínguez, Chiapas
25 de Septiembre 2022.

$\theta = 47.73 \times 2 = 95.4$

(4)



$\cos 42° = \frac{F_{2x}}{-38N}$ $F_{2x} = -38 (\cos 42°)$

$-28.234N$

$\sin 42° = \frac{F_{2y}}{-38N} \rightarrow F_{2y} = -38 (\sin 42°) =$

$-25.442N$

$\cos 50° = \frac{F_{3x}}{21}$ $F_{3x} = 21 (\cos 50°) = 13.482N$

$\sin 50° = \frac{F_{3y}}{-21}$ $F_{3y} = -21 (\sin 50°) = -16.086N$

$\theta \tan^{-1} = \frac{-16.508}{-14.752}$

$\Sigma F_x = -28.234 + 13.482 = -14.752N$

$\theta = 48.215N$

$\Sigma F_y = 25 - 25.442N - 16.086 = -16.508N$

$\sqrt{(-14.752)^2 + (-16.508)^2}$

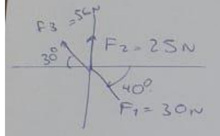
$R = \sqrt{49.135}$

$\sqrt{217.621 + 272.514}$

$R = 22.138N$

$\tan \theta = \frac{co}{ca} \rightarrow \tan^{-1} \frac{23.98N}{8.21N} = \tan^{-1} = 71.04$

$\tan^{-1} \frac{23.98N}{8.21N} = 71.1004$ = En Grados $71° 6' 1.46$



$F_3 = 56N$ 30°

12/09
(1)

$\cos 40° = \frac{F_{1x}}{-30N} \rightarrow F_{1x} = -30N (\cos 40°) = 22.98N$

$\sin 40° = \frac{F_{1y}}{-30N} \rightarrow F_{1y} = -30N (\sin 40°) = -19.28N$

$\cos 30° = \frac{F_{3x}}{56N} \rightarrow F_{3x} = 56° (\cos° 30) = 48.49N$

$\sin 30° = \frac{F_{3y}}{56N} \rightarrow F_{3y} = 56° (\sin° 30) = -46.42N$

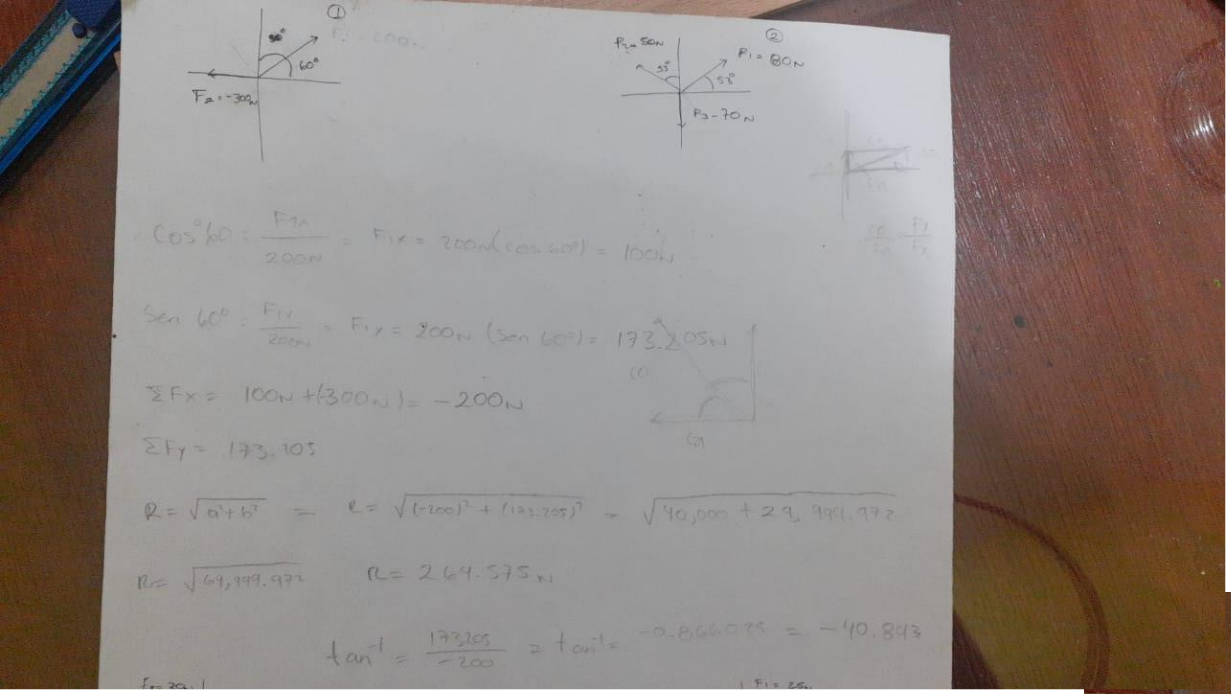
$F_x = (+22.98N) + (-48.49N) = -25.51N$

$F_y = 19.28N + 46.42N + 25N = -20.14N$

$R = \sqrt{(+25.51) + (-20.14N)}$

$R = $ [illegible] $44N$

$R = \sqrt{650.7601 + (}$



$\cos 60° = \frac{F_{1x}}{200N} \rightarrow F_{1x} = 200N(\cos 60°) = 100N$

$\operatorname{Sen} 60° = \frac{F_{1y}}{200N} \rightarrow F_{1y} = 200N\ (\operatorname{Sen} 60°) = 173.205N$

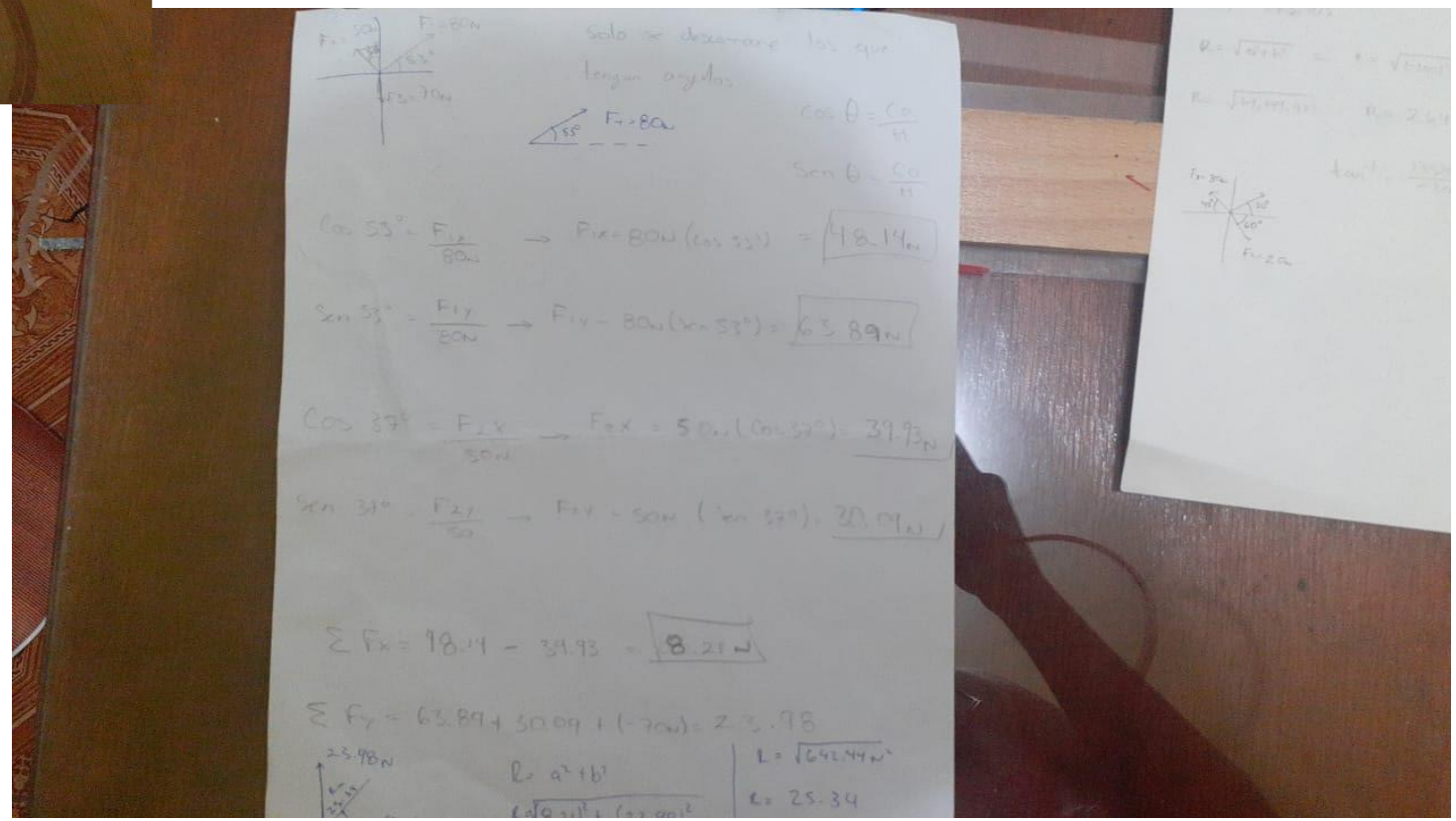
$\Sigma Fx = 100N + (-300N) = -200N$

$\Sigma Fy = 173.105$

$R = \sqrt{a^2+b^2} \quad R = \sqrt{(-200)^2 + (173.205)^2} = \sqrt{40,000 + 29,999.972}$

$R = \sqrt{69,999.972} \quad R = 264.575N$

$\tan^{-1} = \frac{173.205}{-200} = \tan^{-1} = -0.866025 = -40.893$



$\cos \theta = \frac{Co}{H}$

$\operatorname{Sen} \theta = \frac{Co}{H}$

$\cos 55° = \frac{F_{1x}}{80N} \rightarrow F_{1x} = 80N(\cos 55°) = 48.14N$

$\operatorname{Sen} 55° = \frac{F_{1y}}{80N} \rightarrow F_{1y} = 80N(\operatorname{Sen} 55°) = 65.89N$

$\cos 37° = \frac{F_{2x}}{50N} \rightarrow F_{2x} = 50N(\cos 37°) = 39.93N$

$\operatorname{Sen} 37° = \frac{F_{2y}}{50} \rightarrow F_{2y} = 50N(\operatorname{Sen} 37°) = 30.09N$

$\Sigma Fx = 48.14 - 39.93 = 8.21N$

$\Sigma Fy = 65.89 + 30.09 + (-70N) = 25.98$

25.98N

$R = a^2+b^2$

$L = \sqrt{642.44N^2}$

$L = 25.34$