UDS

Mi Universidad

Nombre del Alumno: Frida Lizbeth Reséndiz Salazar

Nombre del tema : Ejercicios

Parcial : I

Nombre de la Materia : Resistencia de materiales

Nombre del profesor: Pedro Alberto García López

Nombre de la Licenciatura: Arquitectura

Cuatrimestre: 4

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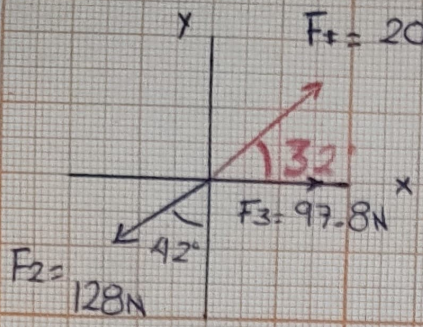
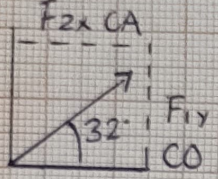
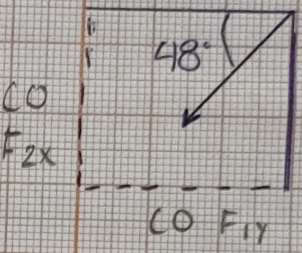
Resendiz Salazar
Frida Lizbeth



F1
Sen 32° (200N)
= 105.983 N
Cos 32° (200 N)
= 169.609 N



T_2 =
Cos 48° (128N)
= -85.648 N
Sen 48° (128N)
= -95.122 N



$\sum F_x$ = 169.609N - 85.648N + 97.8N = 181.761 N

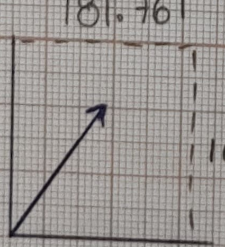
$\sum F_y$ = 105.983N - 95.122N = 10.861 N

$h\sqrt{(181.761N)^2 + (10.861N)^2}$

h = 182.085 N

$\tan\theta = \frac{CO}{CA}$

$\tan = \frac{10.861N}{181.761N}$



$\tan^{-1} = 3.419$

90 - 3.419 = 86.581

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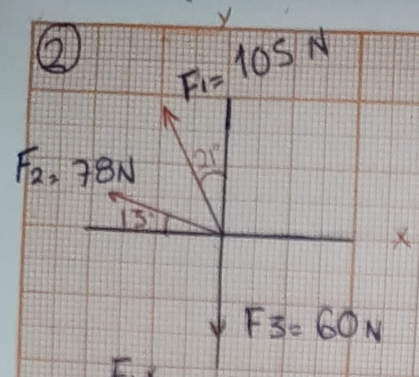

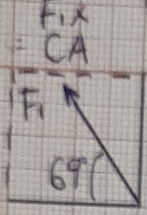

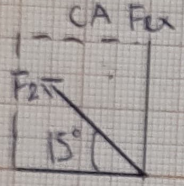

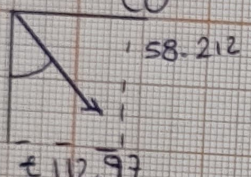

$F_1 =$

$\text{Sen}\,\theta = \frac{F_{1y}}{69°} = \text{Sen}\ 69°\ (105\ N)$

$= 98.025\ N$

$\cos = \frac{F_{1x}}{69°} = \cos 69°\ (105\ N)$

$= -37.628\ N$

$F_2 =$

$\cos\theta = \frac{F_{2x}}{15°} = \cos 15°\ (78\ N)$

$= -75.342\ N$

$\text{Sen}\,\theta = \frac{F_{2y}}{15°} = \text{Sen}\ 15°\ (78\ N)$

$= 20.187\ N$

$\sum F_x = 0$

$-37.628N - 75.342\ N = -112.97\ N$

$\sum F_y = 0$

$98.025N + 20.187 - 60N = 58.212\ N$

$H\sqrt{(-112.97\ N)^2 + (58.212\ N)^2}$

$H = 127.085$

$\tan\theta = \frac{CO}{CA}$

$\tan\theta = \frac{58.212\ N}{-112.97\ N} = -0.515$

$\tan^{-1}(-0.515) = -27.248$

$180 - 27.261 = 152.784$