UDS

Mi Universidad

ejercicios

Nombre del Alumno: Gael Federico López Ochoa

Nombre del tema: fuerzas coplanares

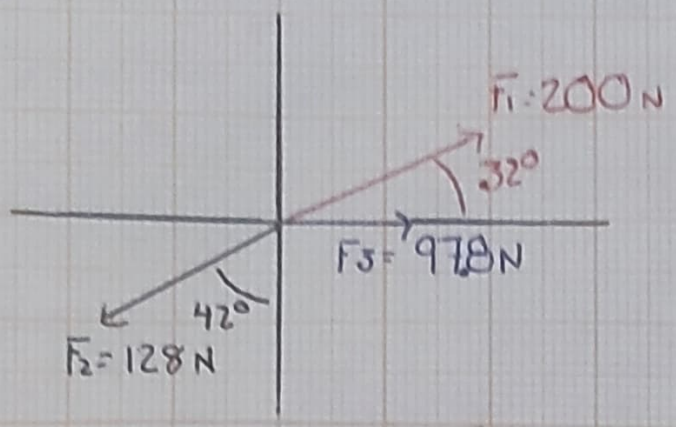
Parcial: 1

Nombre de la Materia: resistencia de materiales de construcción

Nombre del profesor: Pedro Alberto García

Nombre de la Licenciatura: arquitectura

Cuatrimestre: 4



$F_1 =$

Sen $32° \cdot 200\,N = 105.9838\,N$

Cos $32° \cdot 200\,N = 169.6096\,N$

F_2

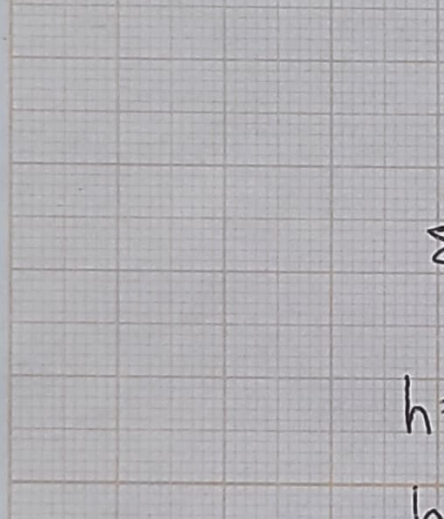
Sen $48° \cdot 128\,N = -95.1225\,N$

Cos $48° \cdot 128\,N = -85.6487\,N$

$\Sigma F_y = 105.9838\,N - 95.1225\,N = 10.8613\,N$

$\Sigma F_x = 169.6096\,N - 85.6487\,N + 978 = 181.7609\,N$

$h = \sqrt{(10.8613)^2 + (181.7609)^2}$

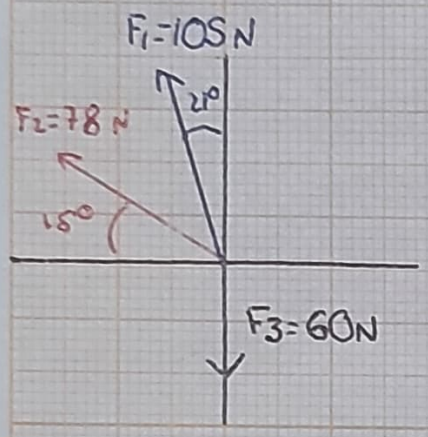


$h = 18208512\,N = FR$

$\tan\theta = 10.8613 / 181.7609$

$\tan\theta = -0.059755$

$\tan^{-1} = 3.4196°$



$F_1 = 105\,N$

Sen $69° \cdot 105\,N = 98.0259\,N$

Cos $69° \cdot 105\,N = -37.6286\,N$

$F_2 =$

Sen $15° \cdot 78\,N = 20.1878\,N$

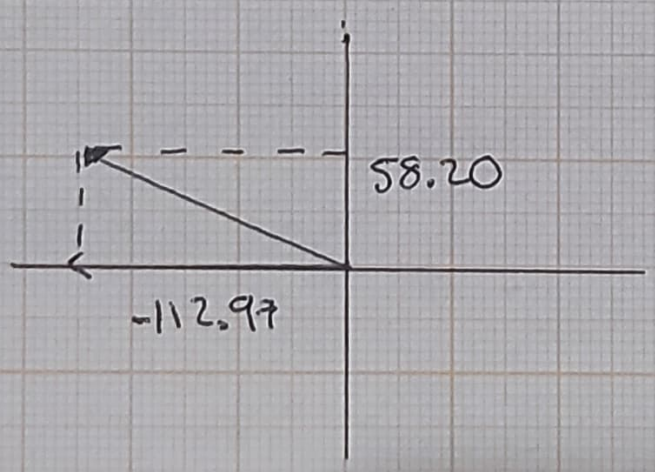
Cos $15° \cdot 78\,N = -75.3422\,N$

$\Sigma F_y = 98.0259\,N + 20.1878\,N - 60\,N = 58.2059\,N$

$\Sigma F_x = -37.6286 - 75.3422 = -112.9708\,N$

$h = \sqrt{(-112.9708\,N)^2 + (58.2059N)^2}$

$h = 127.0839\,N = FR$



$\tan\theta = 58.2059 / -112.9708$

$\tan\theta = 0.51522$

$\tan^{-1} = 27.2588°$

$\theta = 152.74°$