JOSE MIGUEL ALFARO PEREZ

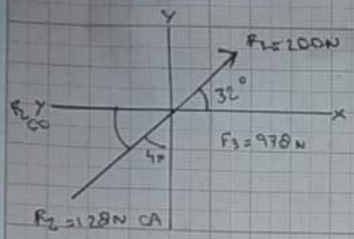
PEDRO ALBERTO GARCIA LOPEZ

RESISTENCIA DE MATERIALES DE CONSTRUCCION

CUATRIMESTRE: 4°

LICENCIATURA EN ARQUITECTURA

FUERZAS COPLANARES



$F_1 = y \sin 32.200 = 105.9838\,N$

$x \cos 32.200 = 169.6096\,N$

F_2

$y \sin 78.128\,N = -95.1225\,N$

$x \cos 78.128\,N = -85.6487$

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

$\Sigma F_x = 169.6096 - 85.6487 - 978 = 181.7609$

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

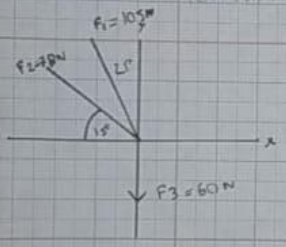
$h = 182.0852$ FR

$\tan\theta = -10.8613 / 181.7609$

$\tan\theta = -0.059755$

$\tan^{-1} = -3.4196$

181.7609



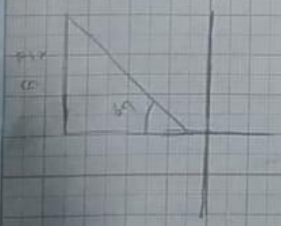
$F_1 = 105\,N$

$y \sin 69.105N = -98.0259\,N$

$x \cos 69.105N = 37.6286\,N$

$y \sin 15° \cdot 78\,N = -20.1878\,N$

$x \cos 15° \cdot 78\,N = 75.3422\,N$



$\Sigma F_y = 98.0259N + 20.187\,N - 60 = 58.2059$

$\Sigma F_x = -37.6286 + 75.3422 = -112.9708$

$h = \sqrt{(-112.9708)^2 + (58.2059)^2} = 127.0391\,N$

FR

$\tan\theta = 58.2059 / -112.9708 = 0.515522$

$\tan^{-1} = -27.2588$