FUERZAS COPLANARES

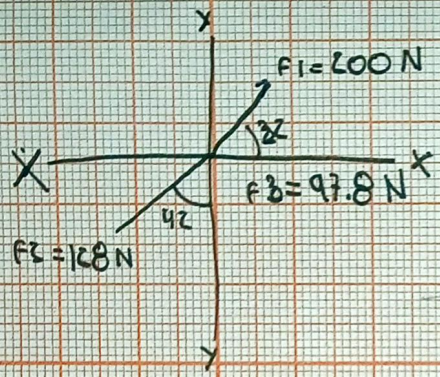
JOSE JAVIER PERERA VENTURA

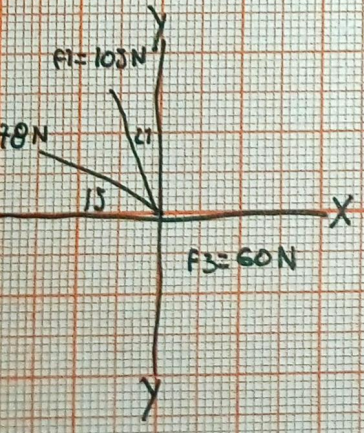
ARQ. PEDRO ALBERTO GARCIA LOPEZ

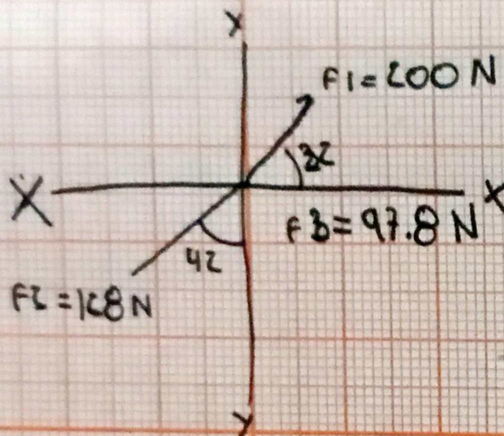
4. CUATRIMESTRE

RESISTENCIA DE MATERIALES DE CONSTRUCCION

24 DE SEPTIEMBRE DEL 2023


Y
F1=200 N
32
X
X
F2=97.8 N
42
F3=128 N
Y


Y
F1=103N
78N
27
15
X
F3=60N
Y



Sen θF = Sen 32 (200N) = 105.983

Sen 32 200N = 169.609

Sen θ F2 = Sen 48 128 = 93.122

cos θ F2 = cos 48 128 = 85.648

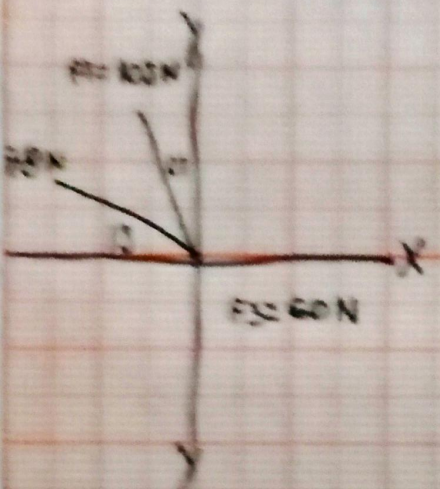
ΣFx = 169.609 − 85.648 + 97.8N = 181.761

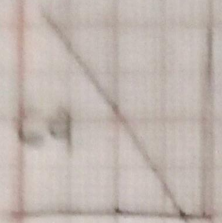
ΣFx = 105.983 − 93.122 = 10.861

$\sqrt{(181.761)^2 + (10.861)^2} = 182.085$

69

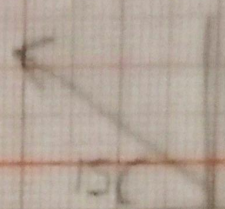
Sen (69) (105) = 98.02





$\text{Sen}(69)(100) = 98.02$

$\cos(69)(105) = 37.82$

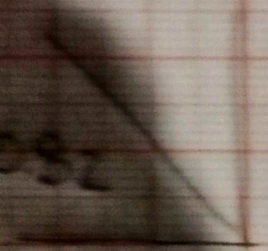


$\text{Sen}(15)(69) = 20.18$

$\cos(15)(75) = -73.23$

$\sum fx = 37.82 - 75.34 = -111.96N$

$\sum fx = 98.02 + 20.18 - 60 = 58.2N$



$h = \sqrt{(111.96)^2 + (58.2)^2}$

$h = 147.07$

$\theta = \tan\theta = \frac{58.2}{-112.96}$

$\theta = -27.25$

$\theta = 152.79$