UDS

nombre del alumno: jocabed solis morales

nombre de la matraia: estatica

3º cuatrimestre

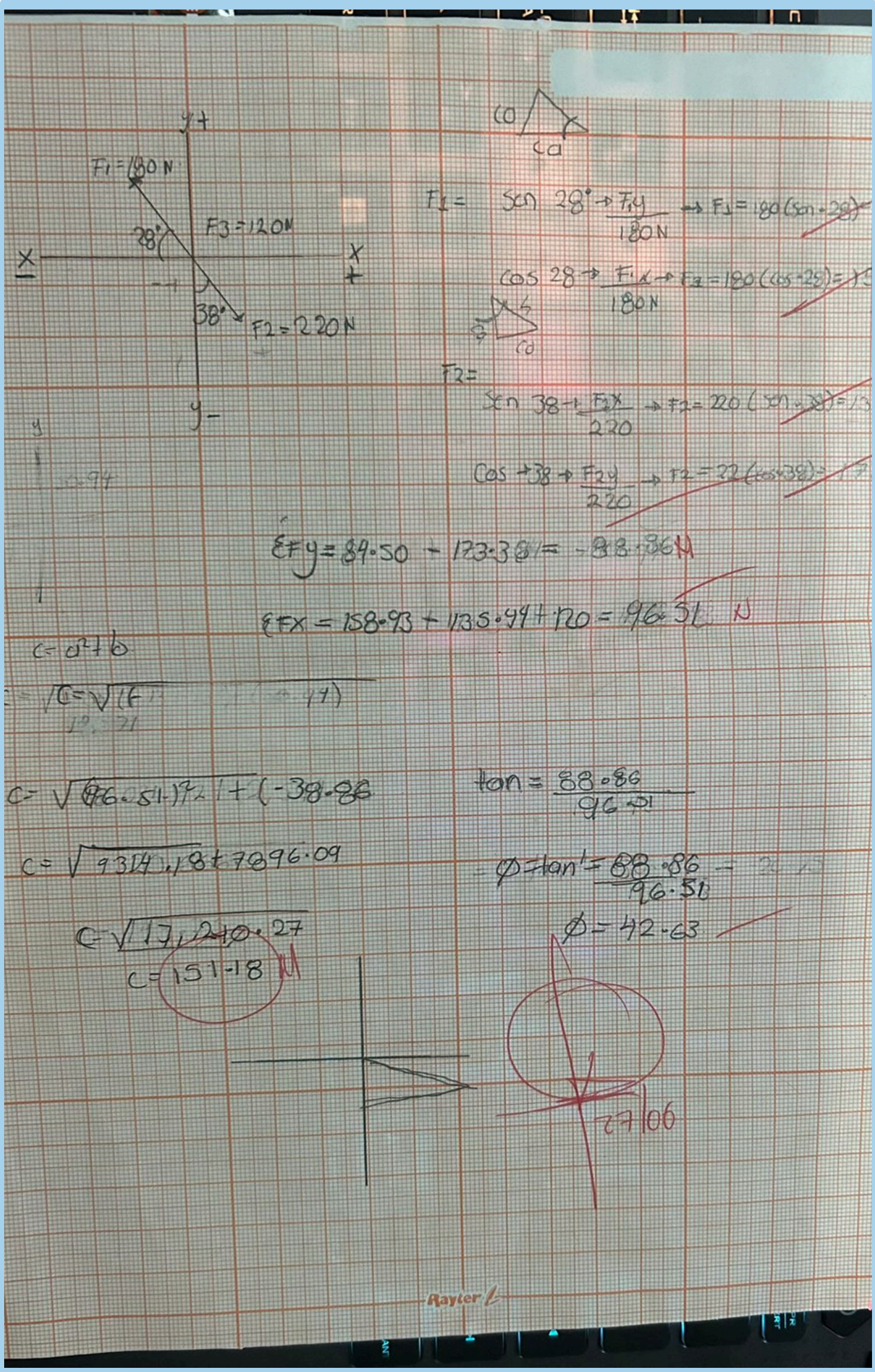
arquitectura

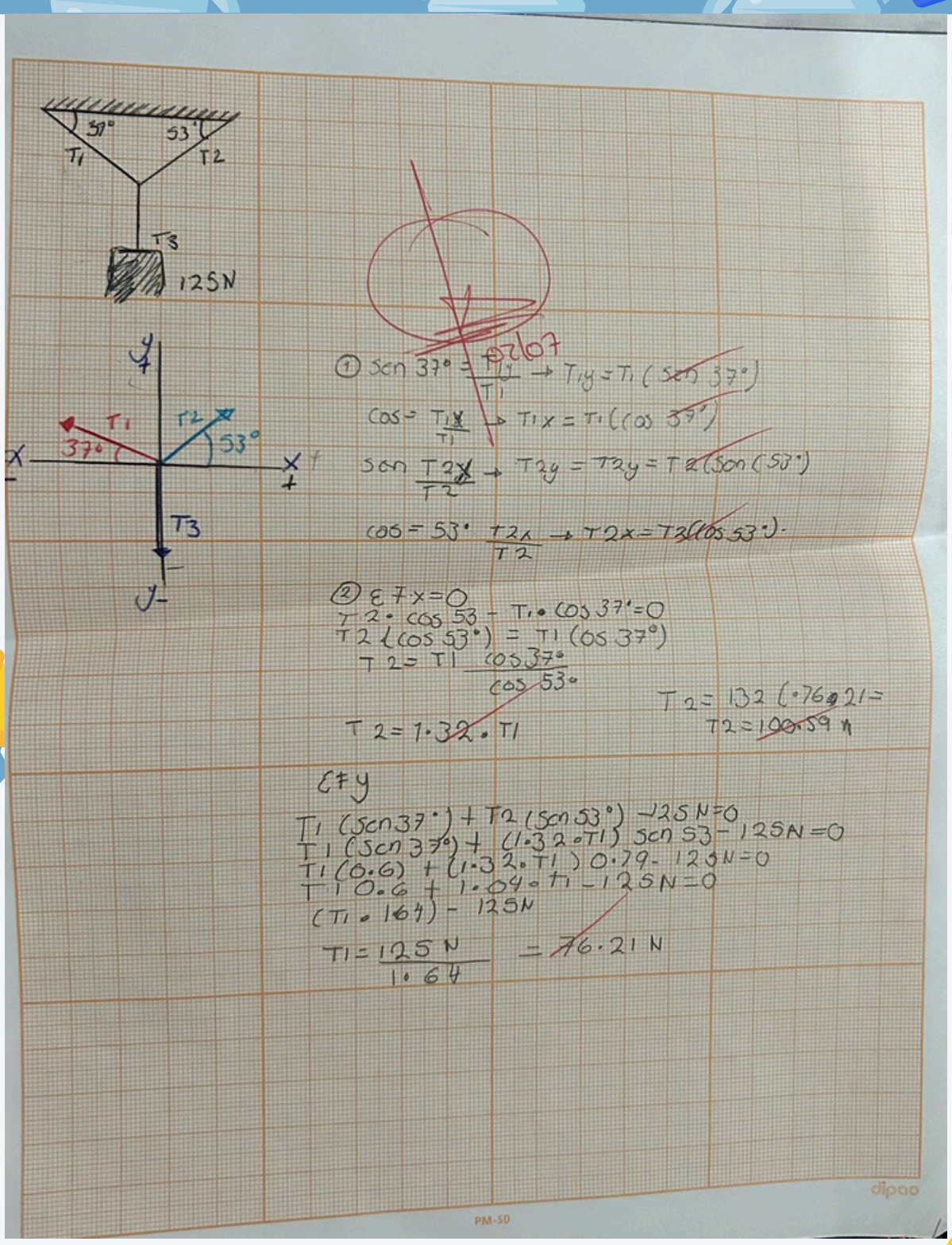
3.

4.

5.

Thank you!


y+
F1=180 N
28°
F3=120N
X
X
38°
F2=220N
y-
CO
CA
F1=
Sen 28° → F1y / 180N → F1 = 180 (Sen 28)
Cos 28 → F1x / 180N → F1 = 180 (Cos 28)
CO
CA
F2=
Sen 38 → F2x / 220 → F2 = 220 (Sen 38)
Cos 38 → F2y / 220 → F2 = 220 (Cos 38)
ΣFy = 84.50 + 123.38 = -38.86 N
ΣFX = 158.93 + 135.44 + 120 = 96.51 N
C = a² + b²
C = √(F1 + F2)
C = √(96.51)² + (-38.86)²
C = √9314.18 + 7096.09
C = √17,210.27
C = 131.18 N
tan = 38.86 / 96.51
Ø = tan⁻¹ = 38.86 / 96.51
Ø = 42.63
27106
Rayter



① $\operatorname{Sen} 37° = \frac{T1y}{T1} \rightarrow T1y = T1(\operatorname{Sen} 37°)$

$\cos = \frac{T1x}{T1} \rightarrow T1x = T1(\cos 37°)$

$\operatorname{Sen} \frac{T2x}{T2} \rightarrow T2y = T2y = T2(\operatorname{Sen}(53°)$

$\cos = 53° \ \frac{T2x}{T2} \rightarrow T2x = T2(\cos 53°)$

② $\Sigma Fx = 0$

$T2 \cdot \cos 53 - T1 \cdot \cos 37° = 0$

$T2(\cos 53°) = T1(\cos 37°)$

$T2 = T1 \frac{\cos 37°}{\cos 53°}$

$T2 = 1.32 \cdot T1$

$T2 = 132(.7621 =$

$T2 = 100.59$ N

ΣFy

$T1(\operatorname{Sen} 37°) + T2(\operatorname{Sen} 53°) - 125N = 0$

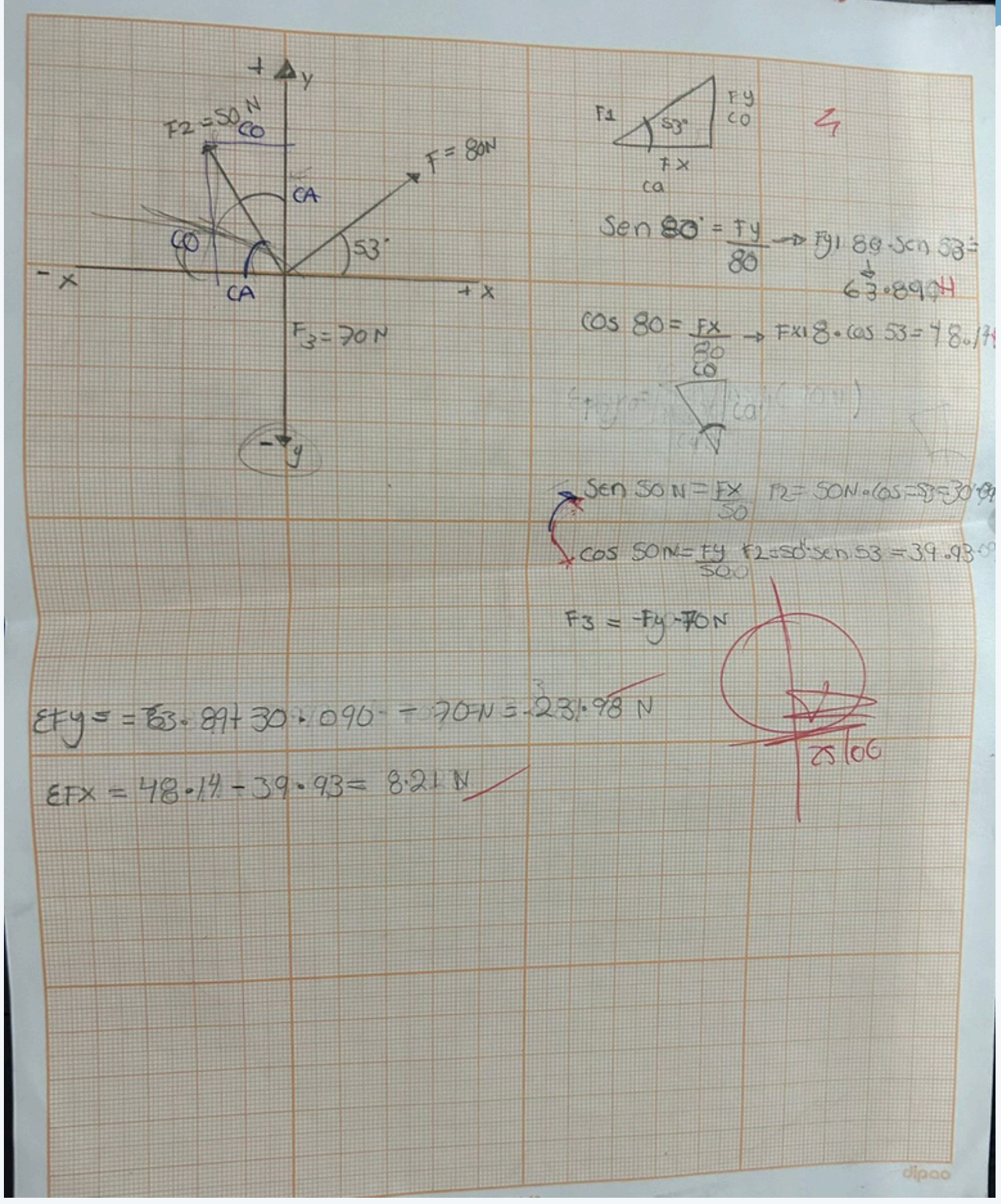
$T1(\operatorname{Sen} 37°) + (1.32 \cdot T1)\operatorname{Sen} 53 - 125N = 0$

$T1(0.6) + (1.32 \cdot T1)0.79 - 125N = 0$

$T1\ 0.6 + 1.04 \cdot T1 - 125N = 0$

$(T1 \cdot 164) - 125N$

$T1 = \frac{125\ N}{1.64} = 76.21\ N$



$\operatorname{Sen} 80 = \frac{Fy}{80} \rightarrow Fy = 80 \cdot \operatorname{Sen} 53 =$

63.89 N

$\cos 80 = \frac{FX}{80} \rightarrow FX = 8 \cdot \cos 53 = 48.14$

$\operatorname{Sen} 50\ N = \frac{FX}{50}$ $F2 = 50N \cdot \cos 53 = 30.09$

$\cos 50N = \frac{Fy}{50.0}$ $F2 = 50 \cdot \operatorname{Sen} 53 = 39.93$

$F3 = -Fy - 70N$

$\Sigma Fy = -63.89 + 30.090 - 70N = -23.98$ N

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

25.06