UDS

PASIÓN POR EDUCAR

Nombre de alumno: Elioenai David López Espinosa

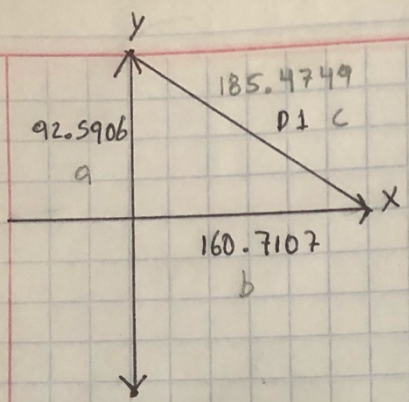**Nombre del profesor:** Pedro Alberto García

Nombre del trabajo: Examen 1era Unidad

Materia: Resistencia De Materiales

Grado: 2do

Grupo: "A"

Comitán de Domínguez Chiapas a 27 de septiembre de 2021
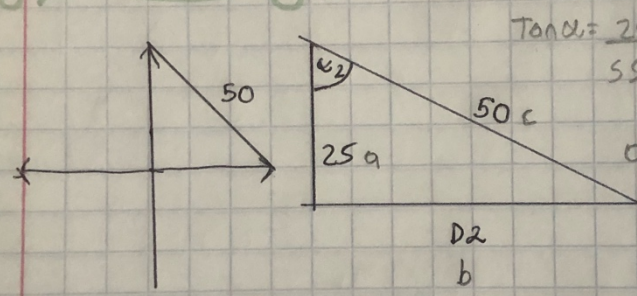
$$D_1 = 185.4779$$

$$D_2 = 55.9016$$
$$D_3 = 50.00001547$$
$$D_4 = 70.7107$$

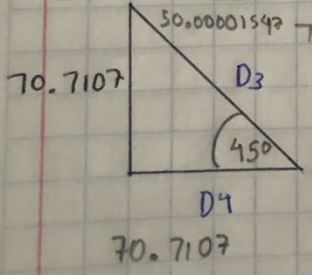$$\alpha_1 = 37.4898$$
$$\alpha_2 = 24.0948$$

$$Area = 17,380.3016$$

y
185.4749
D1 c
92.5906
a
x
160.7107
b

$$c = \sqrt{a^2 + b^2} = \sqrt{(92.5906)^2 + (160.7107)^2} \rightarrow D_1 = 185.4749$$

$$Tan\alpha = \frac{25}{55.9016} \longrightarrow Tan^{-1} = \frac{25}{55.9016}$$

50
α_2
50 c
25 a
D2
b

$$\alpha = 24.0948°$$

$$b = \sqrt{c^2 - a^2} = \sqrt{(50)^2 + (25)^2} \rightarrow D_2 = 55.9016$$

50.00001547
70.7107
D3
45°
D4
70.7107

$$Tan\ 45° = \frac{70.7107}{C.A} \longrightarrow C.A \rightarrow 70.7107 \cdot Tan\ 45°$$

$$C.A = 70.7107$$

$$sen\ 45° = \frac{70.7107}{h} \longrightarrow h = 70.7107 \cdot sen\ 45°$$

$$h = 50.00001547$$

Area 1: 7440.15003

① b×h = 14,880.3001

② $\frac{b \times h}{2}$ (160.7107)(92.5906) ÷ 2 = 7440.15007

Area 2: 808.6063

① b×h = (120.7107)(27.4094) = 3,308.6078

② $\frac{b \times h}{2}$ (70.7107)(70.7107) ÷ 2 = 2500.0015

Area De Levantamiento
17,380.3016

185.4749   Tan α = $\frac{c.o}{c.a}$ → $Tan^{-1} \bar{x} = \frac{92.5906}{120.7107}$

92.5906

120.7107 $\alpha_1 = 37.4898°$