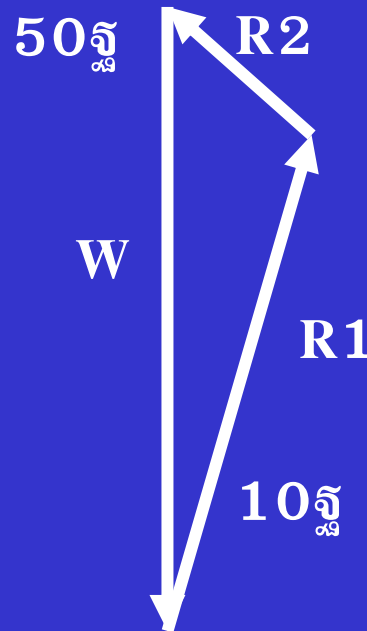
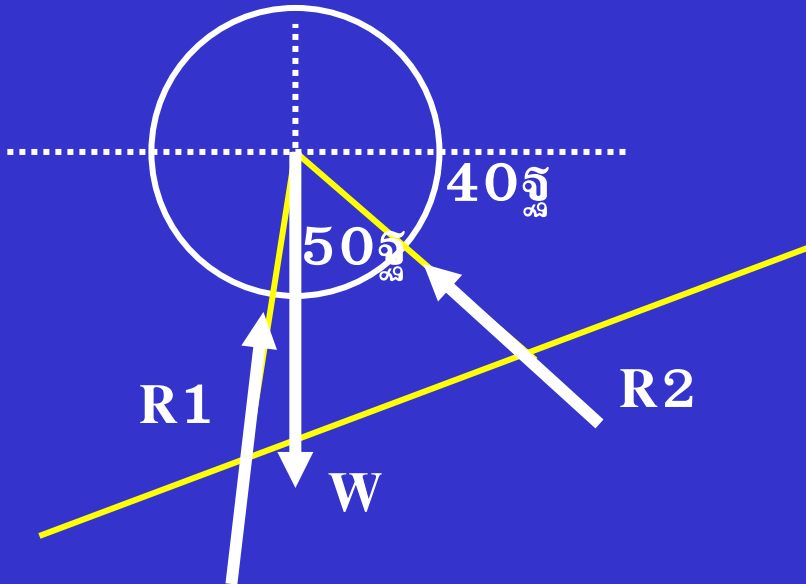
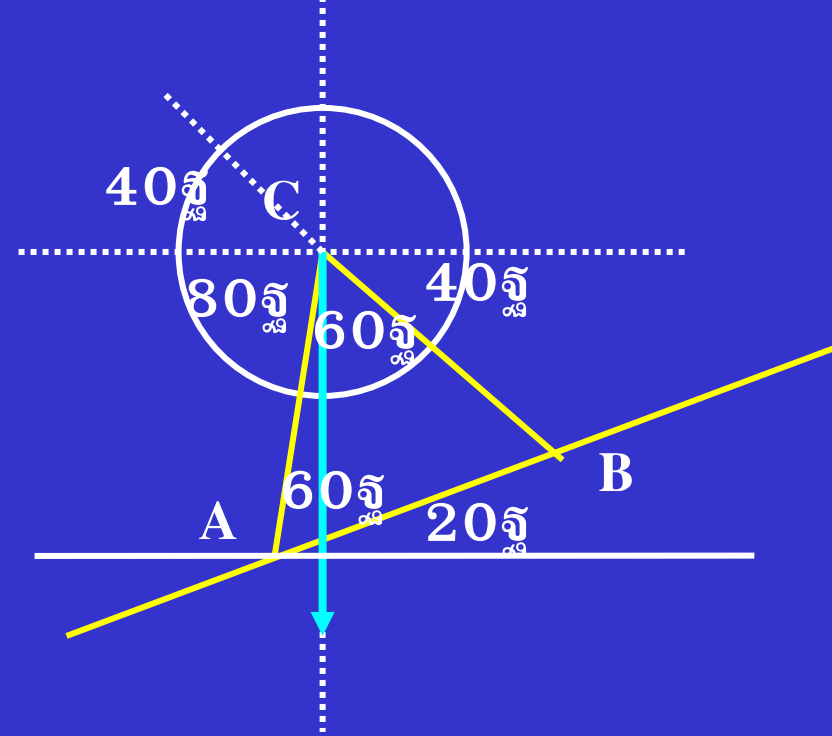
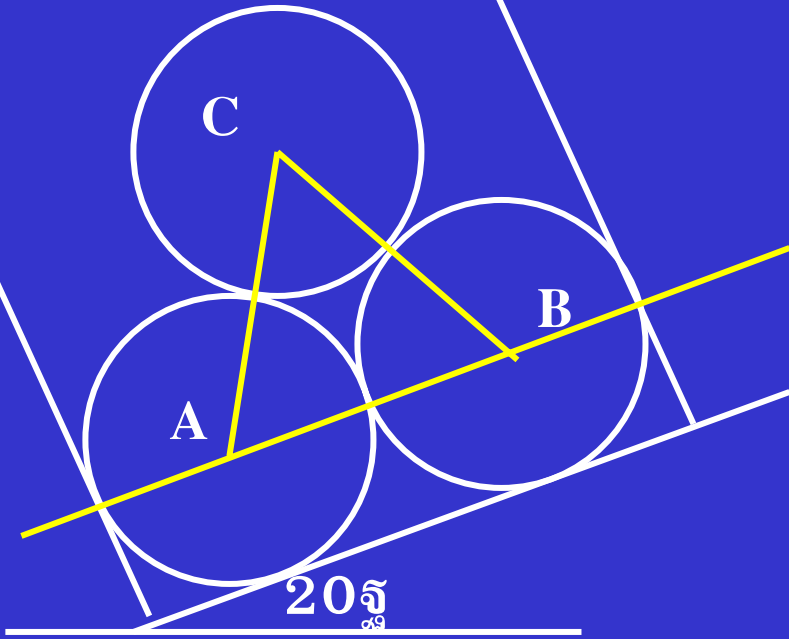
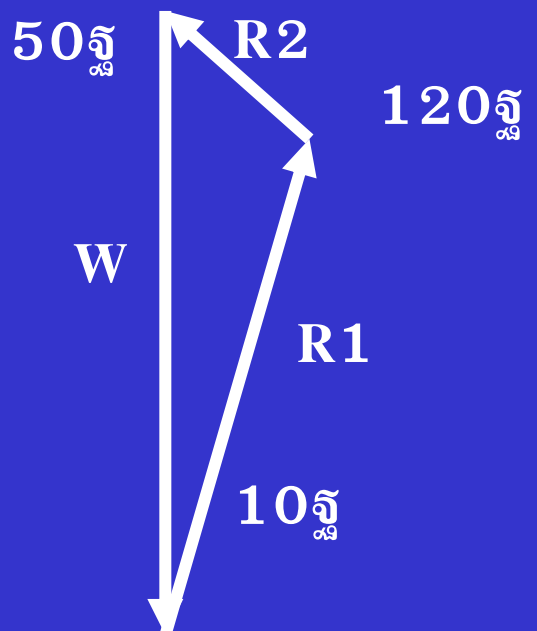
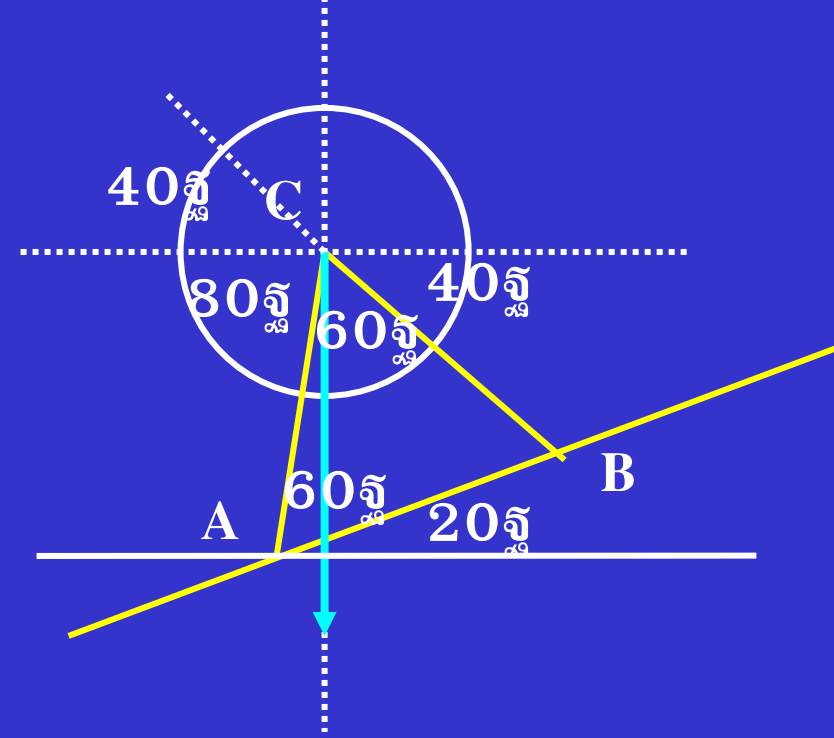
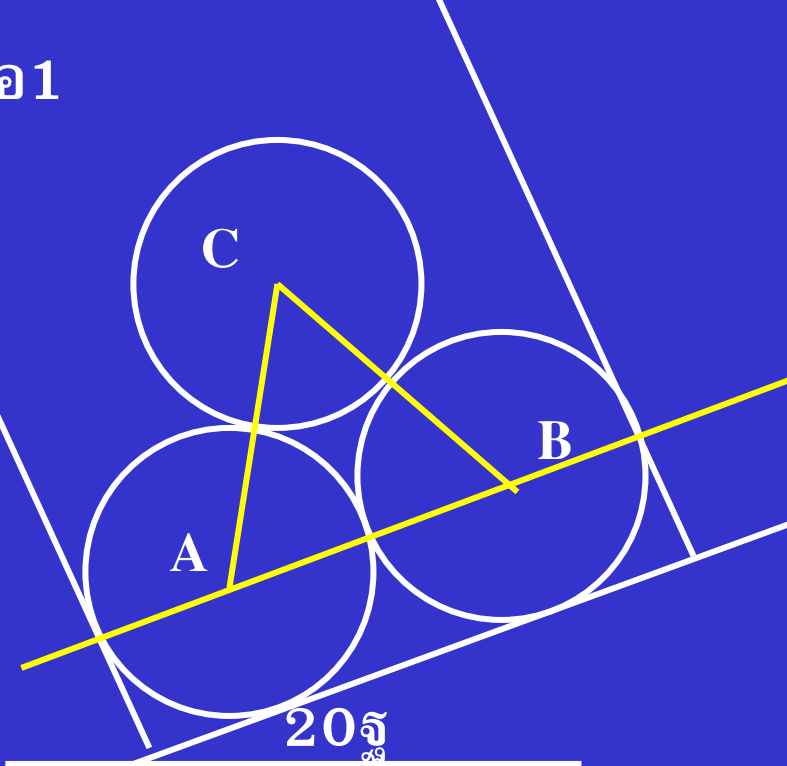


ข้อ 1



ใช้ sine Law

ข้อ 1



ใช้ sine Law

$$R1 / \sin 50 = R2 / \sin 10 = W / \sin 120$$

A กับ C $R1 = 0.9 W$

B กับ C $R2 = 0.2 W$

$P=341\text{N}$

155 มม

200 mm

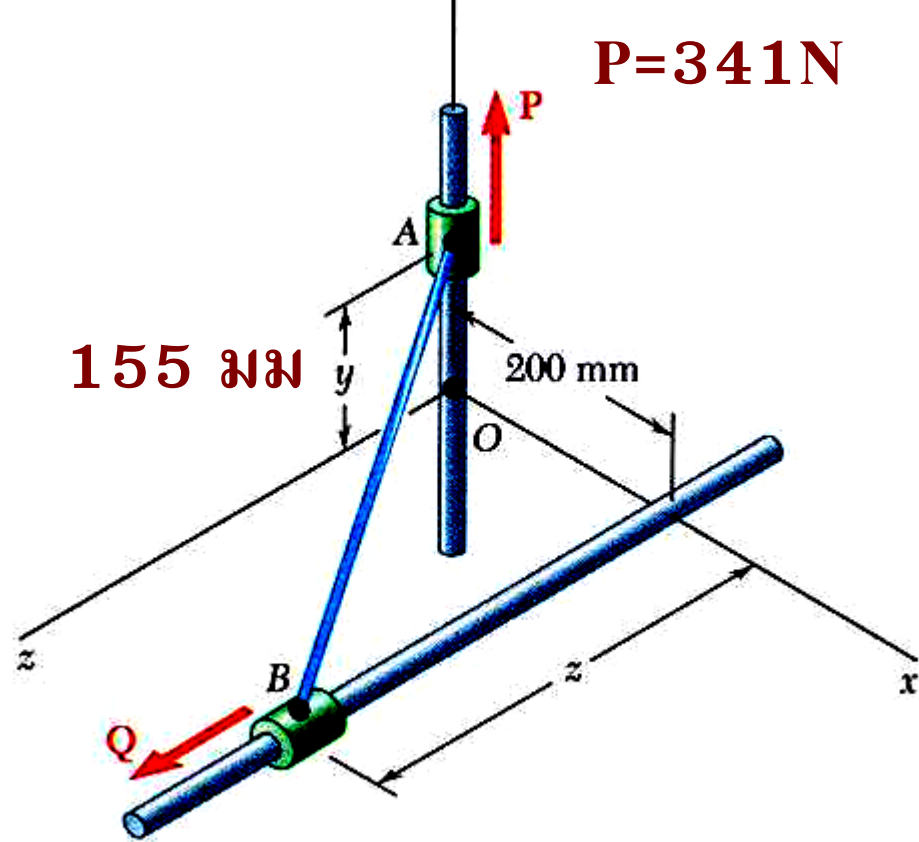
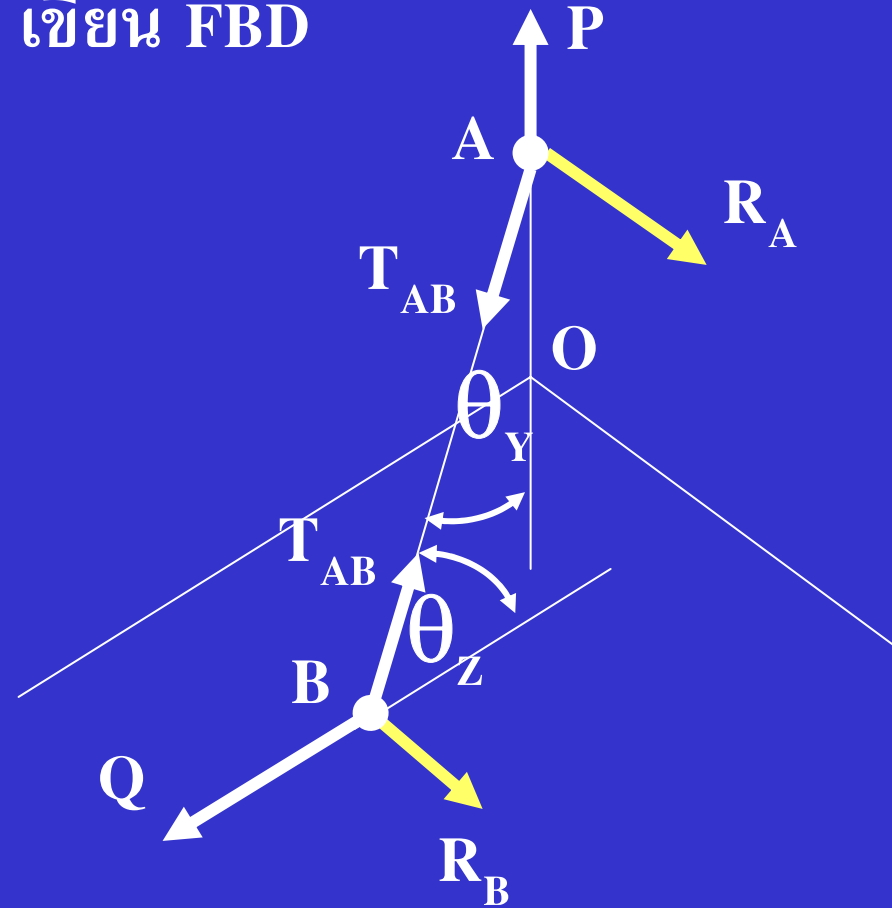


Fig. P2.125

$AB= 525 \quad X=200 \quad Y=155$

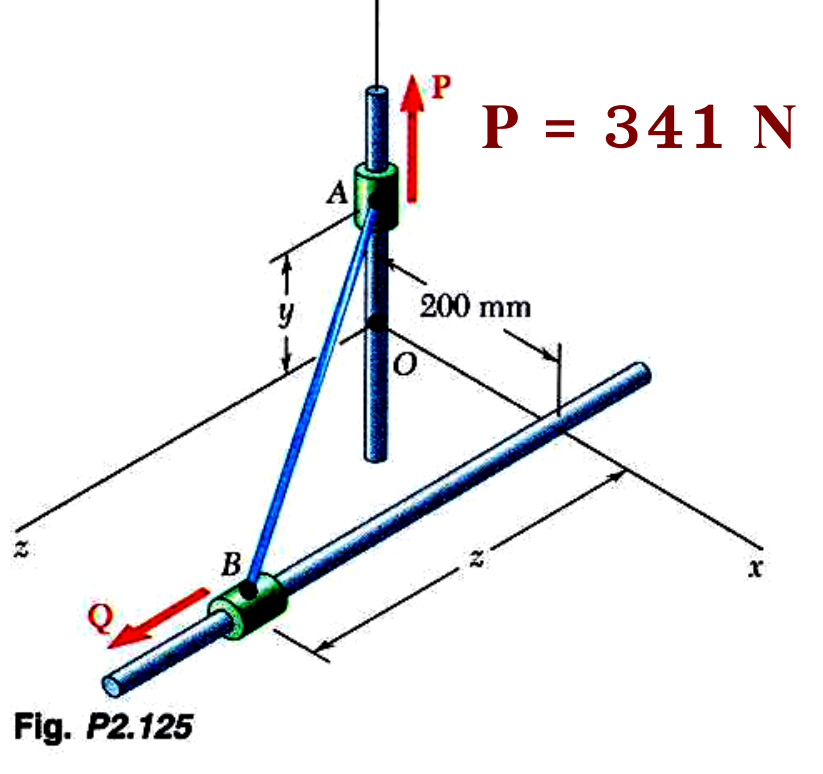
$Z= 460$

หาแรงดึงในเส้นลวด AB และ Q
เขียน FBD



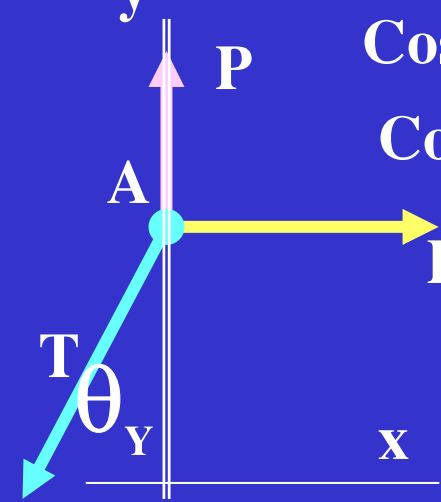
R_A ตั้งฉากกับแกน Y ใช้ $\sum F_Y=0$
 R_B ตั้งฉากกับแกน Z ใช้ $\sum F_Z=0$





$P = 341 \text{ N}$

ที่จุด A



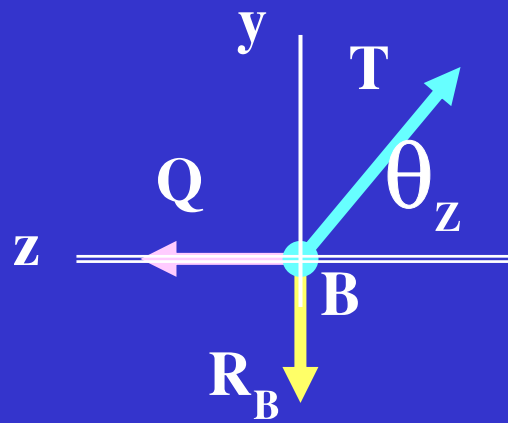
$$\begin{aligned} \cos \theta_X &= X/AB = 0.381 \\ \cos \theta_Y &= Y/AB = 0.295 \\ \cos \theta_Z &= Z/AB = 0.876 \end{aligned}$$

$$\sum F_Y = 0$$

$$P - T(\cos \theta_Y) = 0$$

$$T = 1156 \text{ N}$$

ที่จุด B



$$\sum F_Z = 0$$

$$Q - T(\cos \theta_Z) = 0$$

$$Q = 1012.7$$

Fig. P2.125

$AB = 525$ $X = 200$ $Y = 155$
 $Z = 460$



ข้อ 3

$$\sum F_x \quad F_x = -240$$

$$R = 646.2 \text{ N}$$

$$\sum F_y \quad F_y = 600$$

$$\text{มุม } \gamma = \tan^{-1} (F_x/F_y)$$

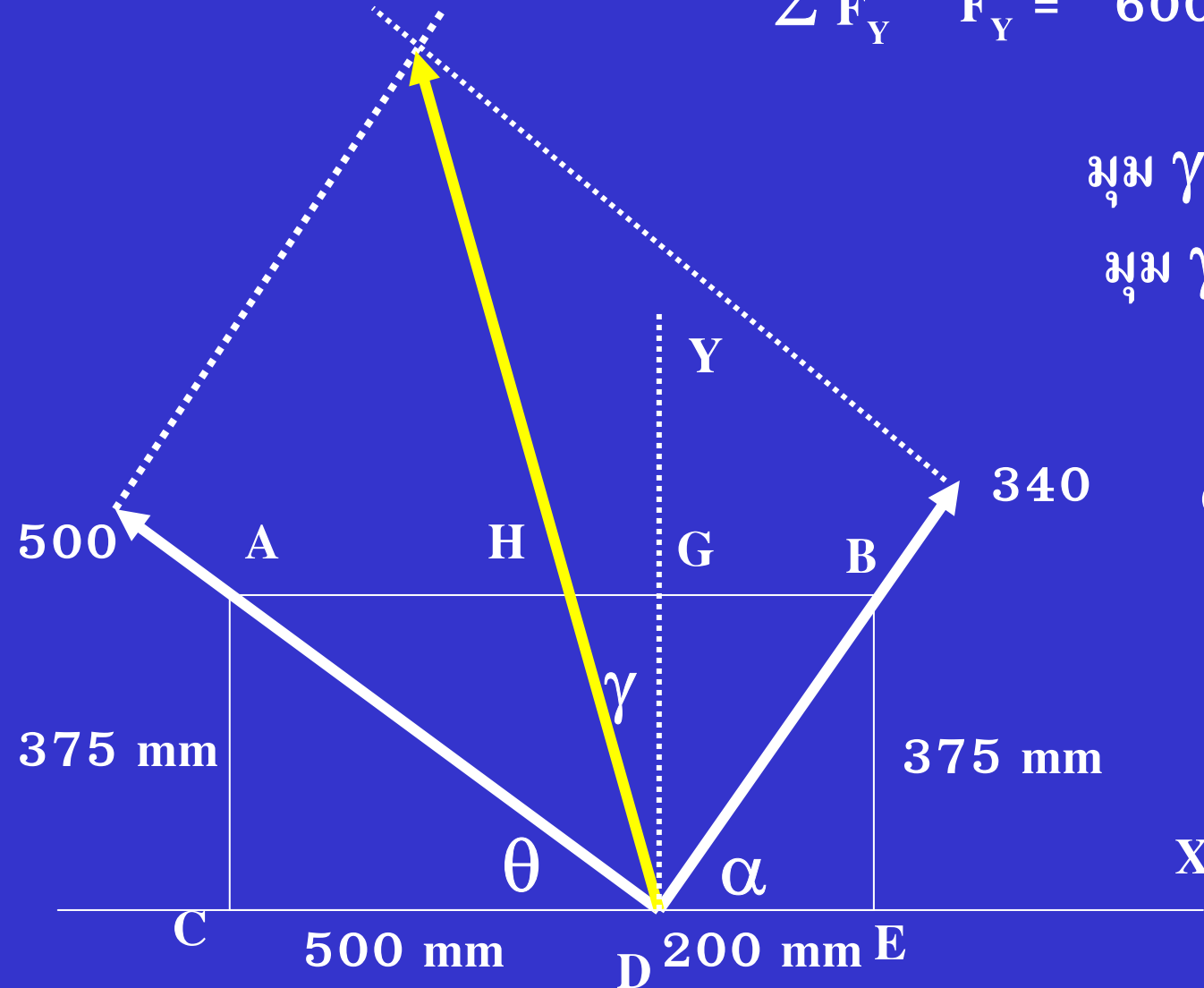
$$\text{มุม } \gamma = 21.8$$

หาระยะ GH

$$GH = DG(\tan \gamma)$$

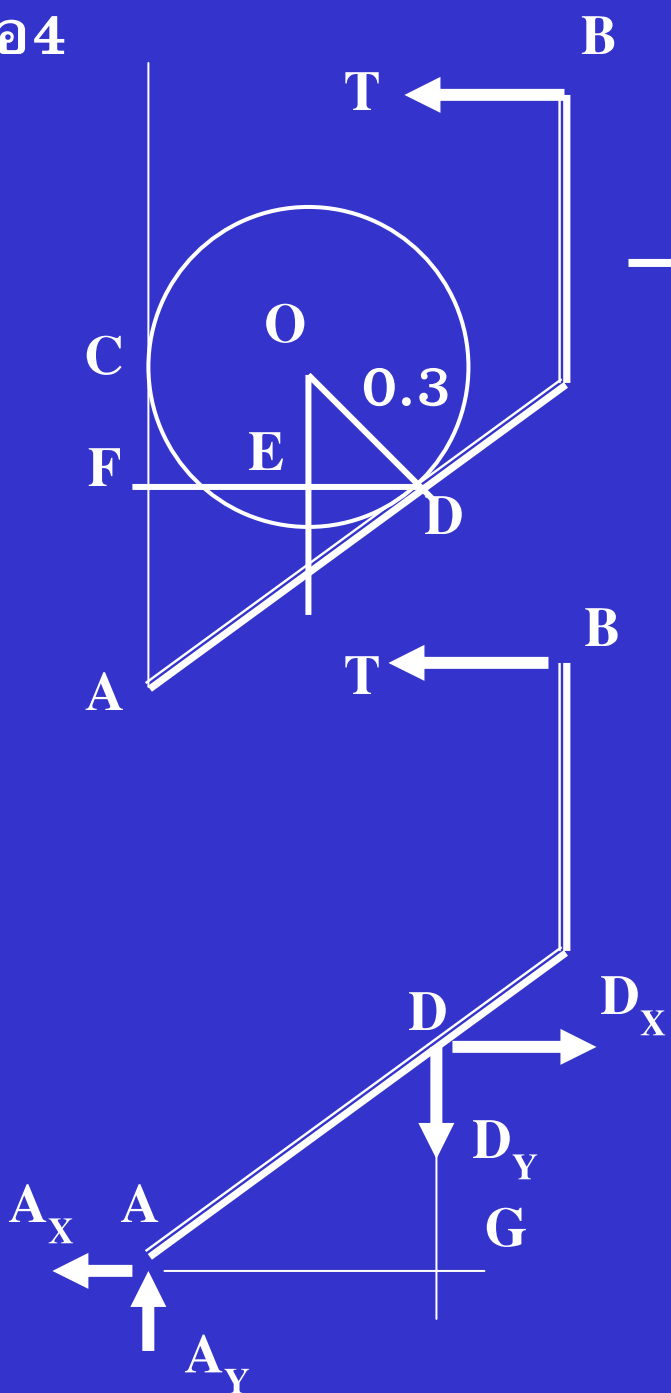
$$GH = 150 \text{ mm}$$

$$AH = 350 \text{ mm}$$



แรงลัพท์ตัดขอบ CE ที่จุด และตัด AB ที่ จุด ห่าง A = 350 mm

ข้อ 4



$$\sum M_D = 0$$

$$C = 304.65$$

$$\sum F_X = 0$$

$$D_X = C = 304.65$$

$$\sum F_Y = 0$$

$$D_Y = W = 352$$

ระยะ DE = $0.3 \sin 40 = 0.193$

DF = $0.3 + 0.193 = 0.493$

OE = $0.3 \cos 40 = 0.223$

DG = $AG \tan 40 = 0.493 \tan 40 = 0.414$

$$\sum M_A = 0 \quad T = 299.65$$

$$\sum F_X = 0 \quad A_X = 304.65 - 299.65 = 5 \text{ N}$$

$$\sum F_Y = 0 \quad A_Y = D_Y = 352 \text{ N}$$

ข้อ 2