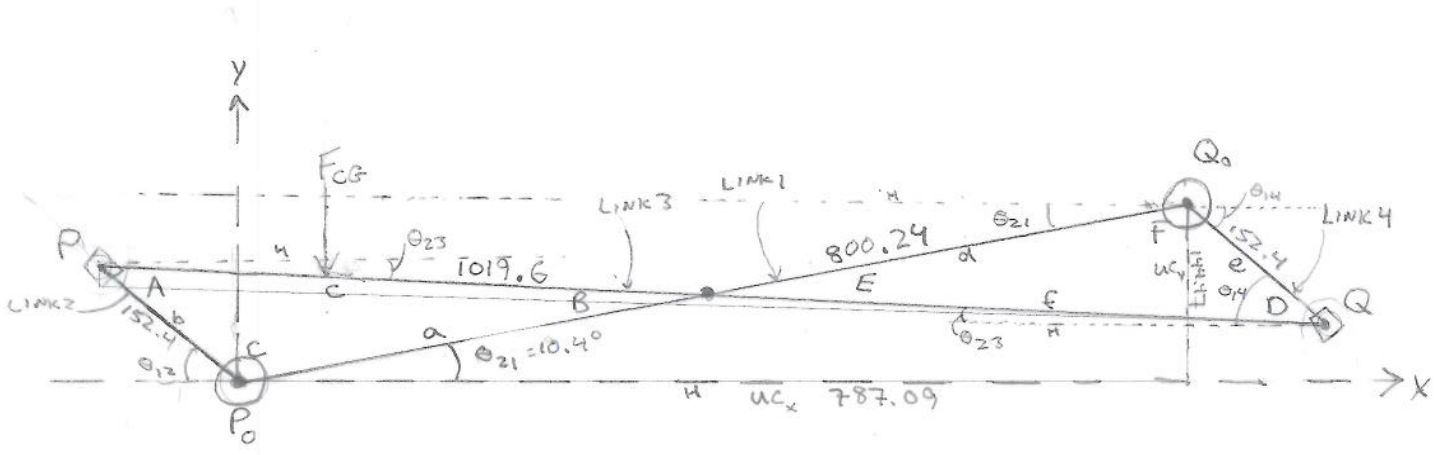


RHS VIEW

FWD
→



$$\theta_{21} + F + \theta_{14} = 180 \text{ deg} = \pi \text{ rad}$$

$$\theta_{14} = D + \theta_{23}$$

$$\theta_{14} = 180 - \theta_{21} + F$$

$$D + \theta_{23} = 169.6 - F$$

$$\theta_{12} = A + \theta_{23}$$

$$\theta_{12} = 180 - C - \theta_{21}$$

$$A + \theta_{23} = 169.6 - C$$

$$\theta_{14} = 169.6 - F$$

$$\theta_{23} = 169.6 - C - A$$

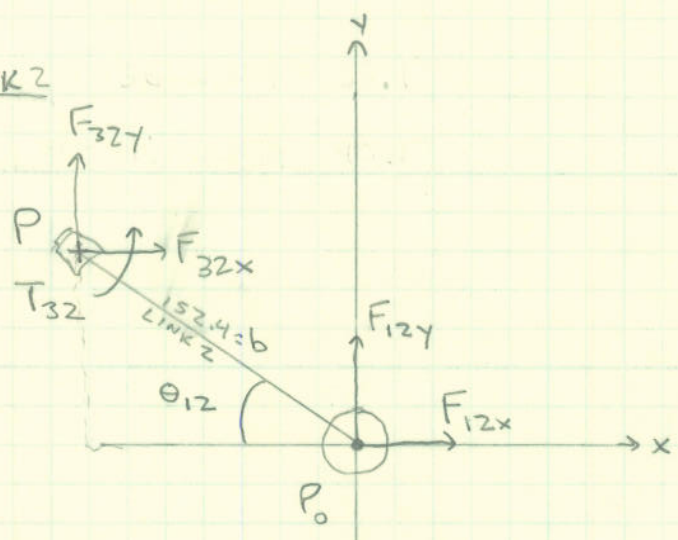
$$\theta_{23} = 169.6 - F - D$$

$$-C - A = -F - D$$

$$C + A = F + D$$

XX+0.1
X.XX+0.01
X.XXX+0.003
ANG.+0.5

• LINK 2

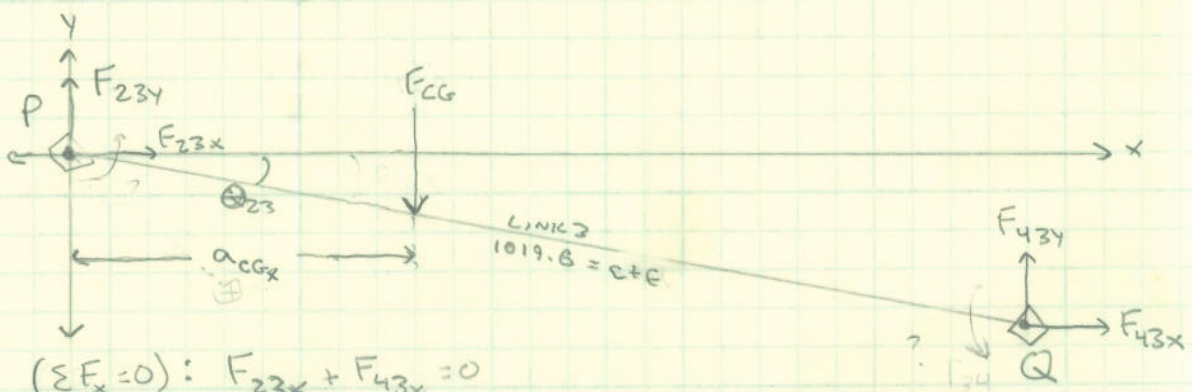


$$(\sum F_x = 0): F_{32x} + F_{12x} = 0$$

$$(\sum F_y = 0): F_{32y} + F_{12y} = 0$$

$$(\sum M_P = 0): T_{32} + F_{12y} \cos(\theta_{12}) \cdot b + F_{12x} \sin(\theta_{12}) \cdot b = 0$$

LINK 3

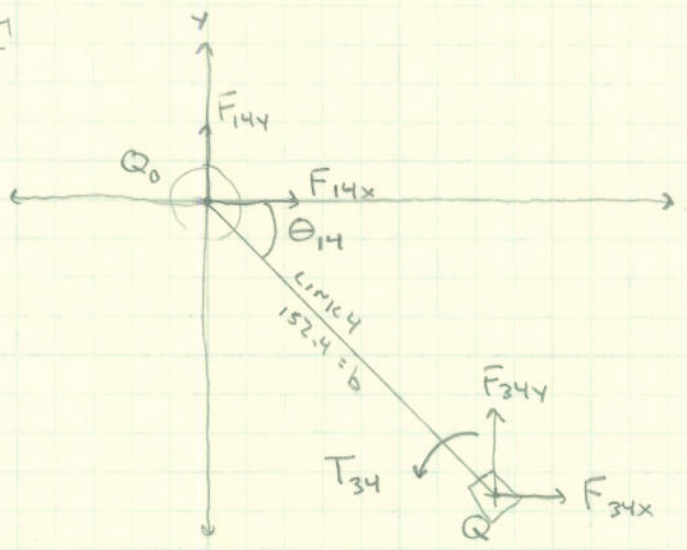


$$(\sum F_x = 0): F_{23x} + F_{43x} = 0$$

$$(\sum F_y = 0): F_{23y} + F_{43y} = 0$$

$$(\sum M_P = 0): F_{43y} \cdot \cos(\theta_{23}) \cdot (c + e) + F_{43x} \cdot \sin(\theta_{23}) \cdot (c + e) - F_{CG} \cdot a_{CGx} = 0$$

LINK 4

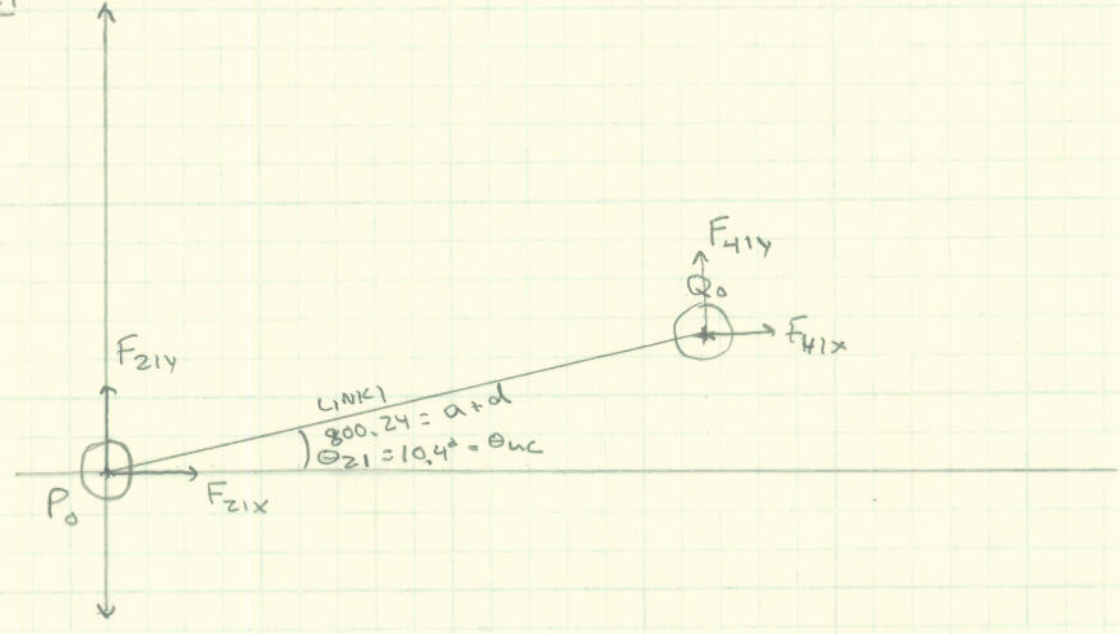


$$(\sum F_x = 0): F_{14x} + F_{34x} = 0$$

$$(\sum F_y = 0): F_{14y} + F_{34y} = 0$$

$$(\sum M_Q = 0): T_{34} - F_{14x} \cdot \cos(\theta_{14}) \cdot b - F_{14y} \cdot \sin(\theta_{14}) \cdot b = 0$$

LINK 1



$$(\sum F_x = 0) = F_{21x} + F_{41x} = 0$$

$$(\sum F_y = 0) = F_{21y} + F_{41y} = 0$$

$$(\sum M_{P_0} = 0) = F_{41y} \cdot \cos(\theta_{21}) \cdot (a+d) - F_{41x} \cdot \sin(\theta_{21}) \cdot (a+d) = 0$$

REACTIONS

(X):

$$F_{32x} = -F_{23x}$$

$$F_{12x} = -F_{21x}$$

$$F_{14x} = -F_{41x}$$

$$F_{34x} = -F_{43x}$$

(Y):

$$F_{32y} = -F_{23y}$$

$$F_{12y} = -F_{21y}$$

$$F_{43y} = -F_{34y}$$

$$F_{14y} = -F_{41y}$$

$$T_{32} + F_{12y} \cdot \cos \theta_{12} \cdot b + F_{12x} \cdot \sin \theta_{12} \cdot b = 0$$

$\swarrow (180 - C - \theta_{uc})$ $\swarrow (180 - C - \theta_{uc})$

$$K_P \cdot (A_s - A) \quad -F_{21y} = -F_{32y} = F_{23y} = -F_{43y} = F_{34y} = -F_{14y} = F_{41y} = -F_{21y}$$

$$F_{12x} = -F_{21x} = F_{41x} = -F_{14x} = F_{34x} = -F_{43x} = F_{23x} = -F_{32x}$$

$$T_{34} - F_{14x} \cdot \cos \theta_{14} \cdot b - F_{14y} \cdot \sin \theta_{14} \cdot b$$

\uparrow \uparrow \uparrow

$$K_Q \cdot (D_s - D) \quad \theta_{14} = (180 - F - \theta_{uc}) \quad \theta_{14} = (180 - F - \theta_{uc})$$

F_{i-d}

- F_{14x}
- F_{14y}
- a, c, d, e
- a_{CGx}
- A, B, C, D, F
- θ_{12}

$$F_{43y} \cdot \cos \theta_{23} \cdot (c+e) + F_{43x} \cdot \sin \theta_{23} \cdot (c+e) - F_{CG} \cdot a_{CGx} = 0$$

\uparrow \uparrow

$$F_{14y} \quad F_{14x}$$

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