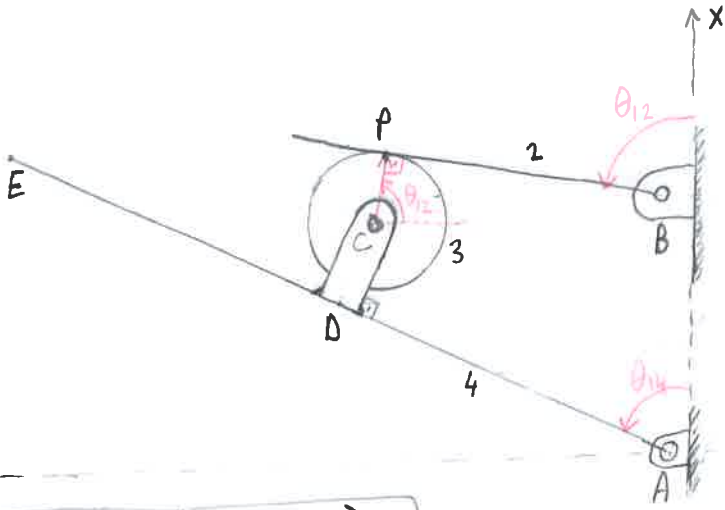


$$F = 3(4-4-1) + 4 = 1$$



$$\vec{AD} + \vec{DC} + \vec{CP} = \vec{AB} + \vec{BP}$$

$$\vec{a}_4 + \vec{a}_5 + \vec{r} = \vec{a}_1 + \vec{a}_2$$

$$a_4 \cdot e^{i\theta_{14}} + a_5 \cdot e^{i(2\pi + \theta_{14})} + r \cdot e^{i(2\pi + \theta_{12})} = a_1 + a_2 \cdot e^{i\theta_{12}}$$

$$a_4 (\cos\theta_{14} + i\sin\theta_{14}) + a_5 (-i)(\cos\theta_{14} + i\sin\theta_{14}) + r (-i)(\cos\theta_{12} + i\sin\theta_{12}) = a_1 + a_2 (\cos\theta_{12} + i\sin\theta_{12})$$

$$a_4 \cos\theta_{14} + a_5 \sin\theta_{14} + r \sin\theta_{12} = a_1 + a_2 \cos\theta_{12}$$

$$a_4 \sin\theta_{14} - a_5 \cos\theta_{14} - r \cos\theta_{12} = a_2 \sin\theta_{12}$$

} Konum denk

a_1, a_4, a_5, r sabit. $a_2, \theta_{12}, \theta_{14}$ değişken

$$-a_4 \sin\theta_{14} \cdot \omega_{14} + a_5 \cos\theta_{14} \cdot \omega_{14} + r \cos\theta_{12} \cdot \omega_{12} = V_{a2} \cos\theta_{12} - a_2 \sin\theta_{12} \cdot \omega_{12}$$

$$a_4 \cos\theta_{14} \cdot \omega_{14} + a_5 \sin\theta_{14} \cdot \omega_{14} + r \sin\theta_{12} \cdot \omega_{12} = V_{a2} \sin\theta_{12} + a_2 \cos\theta_{12} \cdot \omega_{12}$$

} Hız denk

$$-a_4 \cos\theta_{14} \cdot \omega_{14}^2 - a_4 \sin\theta_{14} \alpha_{14} - a_5 \sin\theta_{14} \cdot \omega_{14}^2 + a_5 \cos\theta_{14} \alpha_{14} - r \sin\theta_{12} \cdot \omega_{12}^2 + r \cos\theta_{12} \alpha_{12} = a_{a2} \cos\theta_{12} - V_{a2} \sin\theta_{12} \cdot \omega_{12}$$

$$-V_{a2} \sin\theta_{12} \cdot \omega_{12} - a_2 \cos\theta_{12} \cdot \omega_{12}^2 - a_2 \sin\theta_{12} \alpha_{12}$$

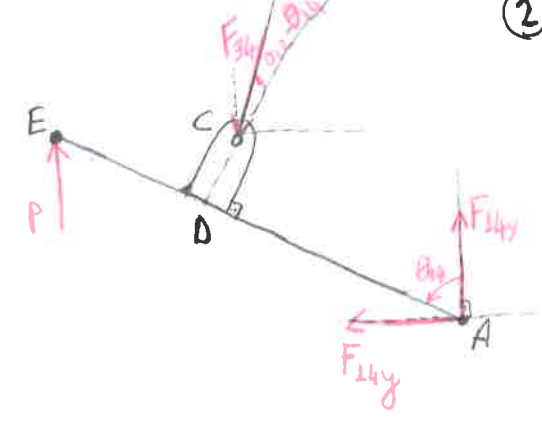
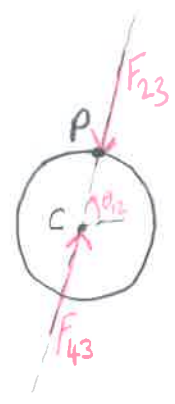
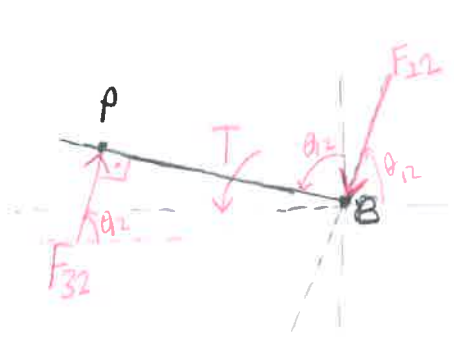
$$-a_4 \sin\theta_{14} \cdot \omega_{14}^2 + a_4 \cos\theta_{14} \alpha_{14} + a_5 \cos\theta_{14} \cdot \omega_{14}^2 + a_5 \sin\theta_{14} \alpha_{14} + r \cos\theta_{12} \cdot \omega_{12}^2 + r \sin\theta_{12} \alpha_{12} = a_{a2} \sin\theta_{12} + V_{a2} \cos\theta_{12} \cdot \omega_{12}$$

} İvme denk

$$+V_{a2} \cos\theta_{12} \cdot \omega_{12} - a_2 \sin\theta_{12} \cdot \omega_{12}^2 + a_2 \cos\theta_{12} \alpha_{12}$$

3 nokta uzunu C mesafesine göre dönme hareketi 2 nokta uzunu birbirine göre hareketleri kayma eksenine paraleldir.

$$\omega_{3/C} = -V_{a2}/r \quad \alpha_{3/C} = -a_{a2}/r$$



$|EA| = l$ olsun $\sum M_A = 0$ \curvearrowright

$$P \cdot l \cdot \sin \theta_{14} + F_{34} \cdot \sin(\theta_{12} - \theta_{14}) \cdot a_5 = F_{34} \cdot \cos(\theta_{12} - \theta_{14}) \cdot a_4$$

$$F_{34} = \frac{P \cdot l \cdot \sin \theta_{14}}{a_4 \cdot \cos(\theta_{12} - \theta_{14}) - a_5 \cdot \sin(\theta_{12} - \theta_{14})}$$

$$(F_{43}) = |F_{23}| = |F_{32}| = |F_{34}| = |F_{12}|$$

$$F_{14x} = -P + F_{34} \sin \theta_{12} = P \left[-1 + \frac{l \cdot \sin \theta_{14} \cdot \sin \theta_{12}}{a_4 \cdot \cos(\theta_{12} - \theta_{14}) - a_5 \cdot \sin(\theta_{12} - \theta_{14})} \right]$$

$$F_{14y} = -F_{34} \cdot \cos \theta_{12} = - \frac{P \cdot l \cdot \sin \theta_{14} \cdot \cos \theta_{12}}{a_4 \cdot \cos(\theta_{12} - \theta_{14}) - a_5 \cdot \sin(\theta_{12} - \theta_{14})}$$

$\sum M_B = 0$ \curvearrowright $F_{32} \cdot a_2 = T$

$$T = \frac{P \cdot l \cdot a_2 \cdot \sin \theta_{14}}{a_4 \cdot \cos(\theta_{12} - \theta_{14}) - a_5 \cdot \sin(\theta_{12} - \theta_{14})}$$