

← You look the system from left side.

$$F_1 = m_1 \omega^2 r_1 = 4 \times 2^2 \times 0.2 = 3.2 \text{ N}$$

$$F_2 = 2^2 \times 2^2 \times 0.2 = 1.6 \text{ N}$$

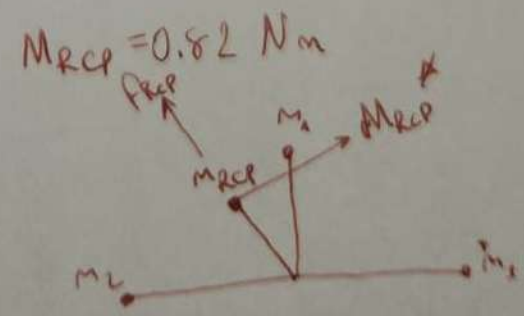
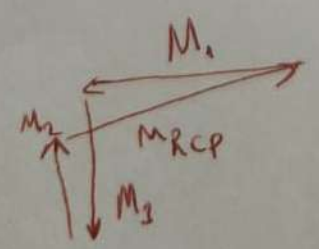
$$F_3 = 1 \times 2^2 \times 0.2 = 0.8 \text{ N}$$

$$\sum M_{LCP} = 0 = M_1 + M_2 + M_3 + M_{RCP}$$

$$M_1 = l_1 \cdot F_1 = 0.25 \times 3.2 = 0.8 \text{ Nm}$$

$$M_2 = l_2 \cdot F_2 = 0.25 \times 1.6 = 0.4 \text{ Nm}$$

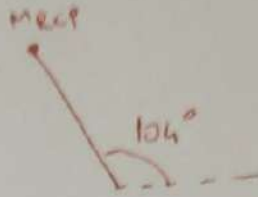
$$M_3 = l_3 \cdot F_3 = 0.75 \times 0.8 = 0.6 \text{ Nm}$$



★ If you use right hand method M_{RCP} should be like this

~~$$F_{RCP} = M_{RCP} \cdot \omega^2 \cdot r_{RCP}$$~~

~~$$F_{RCP} = 0.5 \times 0.82$$~~



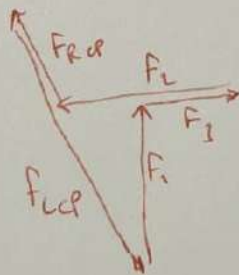
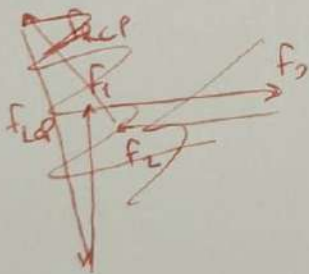
$$F_{RCP} \cdot r_{RCP} = M_{RCP}$$

$$\Rightarrow F_{RCP} = \frac{0.82}{0.5} = 1.64 \text{ N}$$

$$F_{RCP} = M_{RCP} \omega^2 r_{RCP}$$

$$\Rightarrow M_{RCP} = \frac{1.64}{2^2 \times 0.2} = \underline{\underline{2.05 \text{ kg}}} \angle 104^\circ$$

$$\Sigma F = 0 = F_1 + F_2 + F_g + F_{RCP} + F_{LCP}$$



$$F_{LCP} = 4.93$$

$$F_{LCP} = m_{LCP} \cdot \omega^2 \cdot r_{LCP}$$

$$\Rightarrow m_{LCP} = \frac{4.93}{2^2 \times 0.2} = \underline{\underline{6.1 \text{ kg}}} \angle 284^\circ$$

