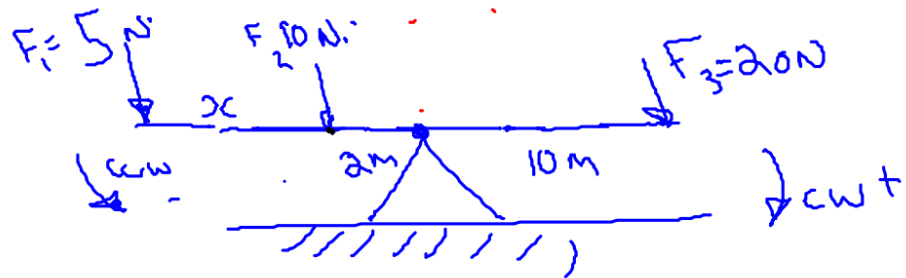


Torque

$$T = F_{\perp} \cdot r$$



$$\sum T = 0 = -F_1(x+2) - F_2(2) + F_3(10) = 0$$

$$-\overset{5}{F_1}x - 2\overset{5}{F_1} - 2\overset{10}{F_2} + 10\overset{20}{F_3} = 0$$

$$-5x - 10 - 20 + 200 = 0$$

$$-5x = -200 + 30$$

$$x = \frac{-170}{-5} = 34\text{ m}$$