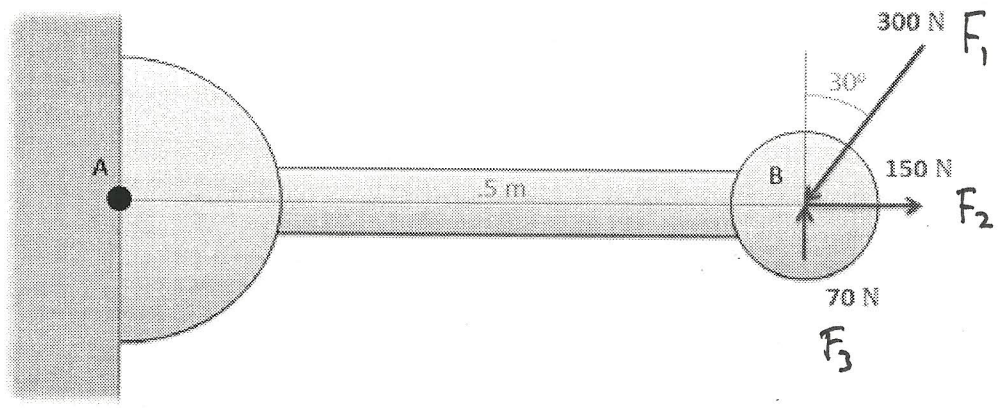
Question 1:

Use Varignon's Theorem to find the moment that the forces in the diagram below exert about point A.

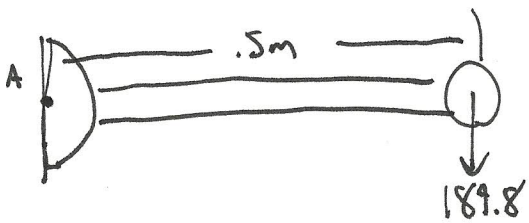


Calculations:

$$F_{TX} = -300\sin(30) + 150 = 0$$

$$F_{TY} = -300\cos(30) + 70 = -189.8\ N$$

$$F_T = \downarrow 189.8$$



$$M = F * d = (189.8\ N)(.5m) \circlearrowright$$

Solution:

$$M = -94.9\ Nm$$