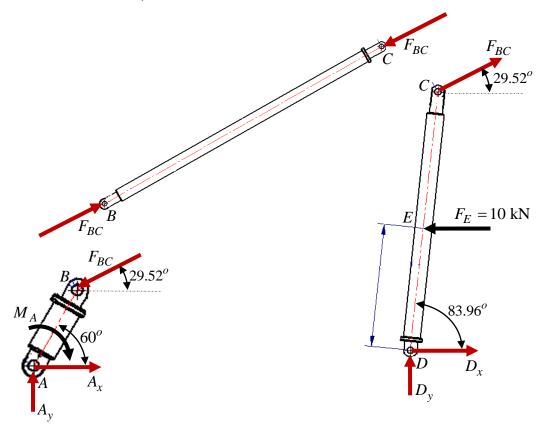**Prepared by:** Mümin Özsipahi   **Date:** 03.12.2014
Room: C-206   **Phone:** 210 7232   **Due: 10.12.2014 until 16:00**
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Solution

Note that, member *BC* is a two force member. Therefore, the free-body diagrams of members can be obtained as follows,

Applying the equations of equilibrium for member *DC*,

$$\sum M_D = 0 \; ; \;\; 10 \cdot 300 \cdot \sin\left(83.96^o\right) - F_{BC} \cdot 600 \cdot \sin\left(83.96^o - 29.52^o\right) = 0 \tag{2.1}$$

Therefore,

$$F_{BC} = 6.11 \text{ kN} \tag{2.2}$$

Applying the equations of equilibrium for member *AB*,

$$\sum M_A = 0 \; ; \;\; M_A - F_{BC} \cdot 120 \cdot \sin\left(60^o - 29.52^o\right) = 0 \tag{2.3}$$

Thus, the moment applied on link *AB* (*M_A*) is obtained as,

$$M_A = 371.9 \text{ Nm} \tag{2.4}$$