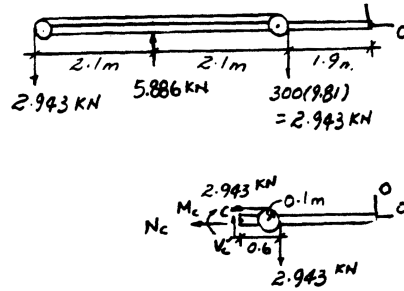
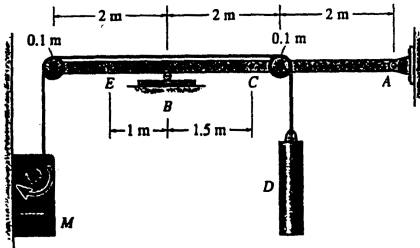


1-13 Determine the resultant internal loadings acting on the cross section through point C in the beam. The load D has a mass of 300 kg and is being hoisted by the motor M with constant velocity.



$$\leftarrow \Sigma F_x = 0; \quad N_C + 2.943 = 0; \quad N_C = -2.94 \text{ kN} \quad \text{Ans}$$

$$+\uparrow \Sigma F_y = 0; \quad V_C - 2.943 = 0; \quad V_C = 2.94 \text{ kN} \quad \text{Ans}$$

$$\curvearrow + \Sigma M_C = 0; \quad -M_C - 2.943(0.6) + 2.943(0.1) = 0$$

$$M_C = -1.47 \text{ kN} \cdot \text{m} \quad \text{Ans}$$

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