

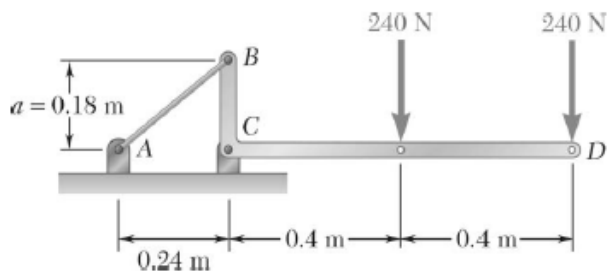
ES221 ENGINEERING MECHANICS I

Additional Problems-Set VI

Due Date: 24.11.2020

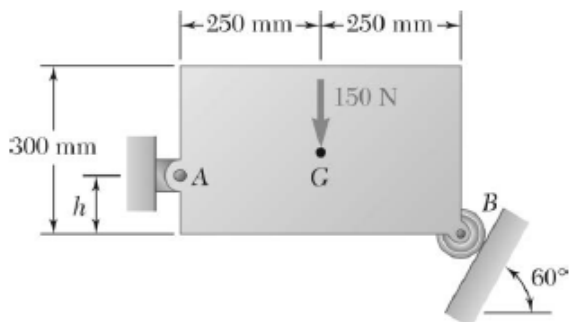
Q1) (30 pts)

The bracket BCD is hinged at C and attached to a control cable at B . For the loading shown, determine (a) the tension in the cable and (b) the reaction at C .



Q2) (30 pts)

Determine the reactions at A and B when $h=200 \text{ mm}$.



Q3) (40 pts)

A 100-kg uniform rectangular plate is supported in the position shown by hinges A and B and by cable DCE that passes over a frictionless hook at C . Assuming that the tension is the same in both parts of the cable, determine (a) the tension in the cable, (b) the reactions at A and B . Assume that the hinge does not exert any axial thrust.

