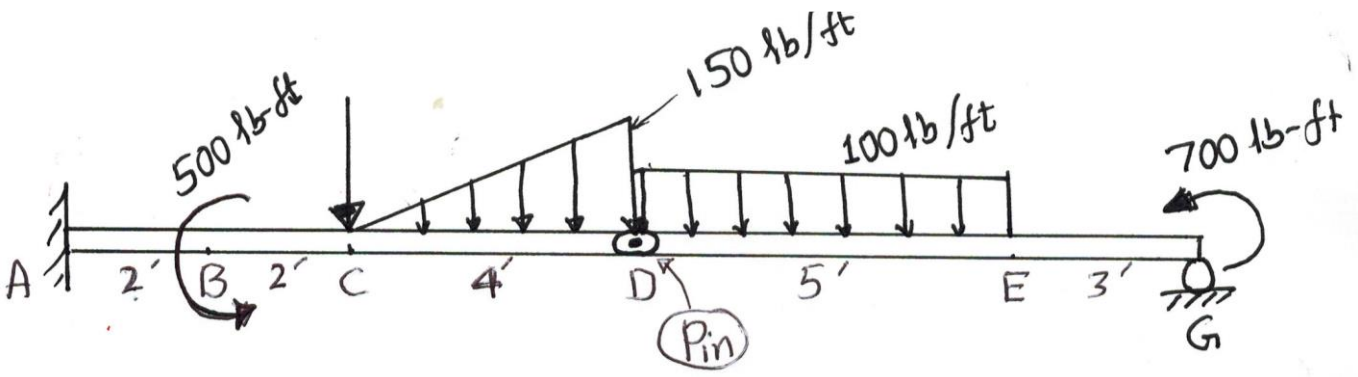
EAS 209A – Mechanics of Solids

HW #5 Due Date: 06/12/2020

Note: Draw necessary Free-body diagrams for all problems

Q.1) (a) Calculate the support reactions of the loaded beam shown below.
(b) Write shear-force and bending moment equations of the beam as a function of distant 'x' from the left-end of the beam for a section between points D and E.
(c) Sketch the shear-force and bending moment diagrams for the beam using the Graphical method. Label the values of shear-force and bending–moment at all key points.



Q.2) (a) Calculate the support reactions of the loaded beam shown below.
(b) Write equations for w(x), V(x) and M(x) of the beam using singularity functions.
(c) Sketch the shear-force and bending moment diagrams for the beam for the beam using the Graphical method. Label the values of shear-force and bending–moment at all key points.