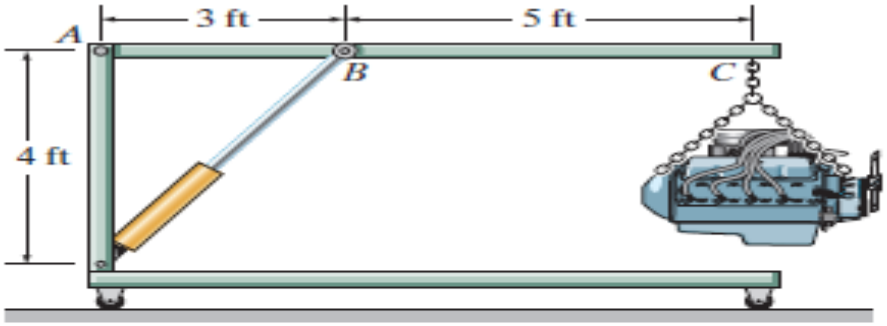
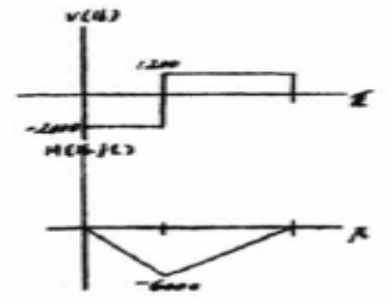
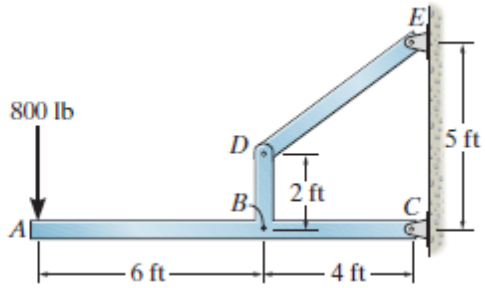
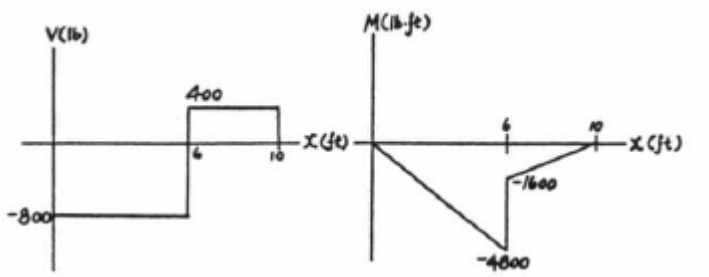
Q1) The engine crane is used to support the engine, which has a weight of 1200 lb. Draw the shear and moment diagrams of the boom *ABC* when it is in the horizontal position shown.





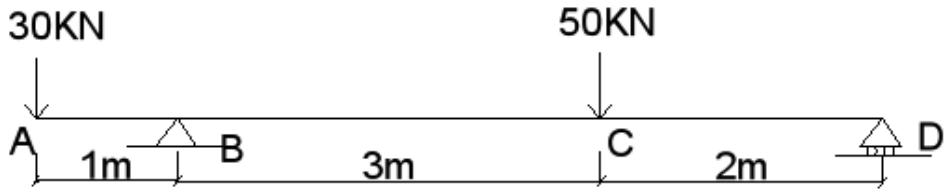
Q2) The overhanging beam has been fabricated with a projected arm *BD* on it. Draw the shear and moment diagrams for the beam *ABC* if it supports a load of 800 lb.
Hint: The loading in the supporting strut *DE* must be replaced
by equivalent loads at point *B* on the axis of the beam.



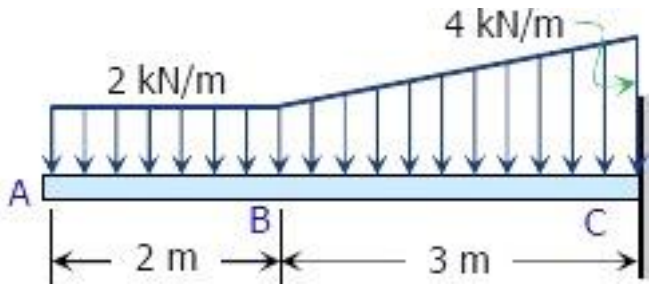


Write shear and moment equations for the beams in the following problems. Also, draw shear and moment diagrams, specifying values at all change of loading positions and at points of zero shear. Neglect the mass of the beam in each problem.

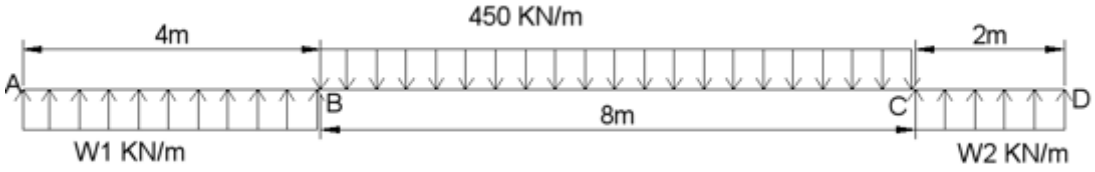
Q1)



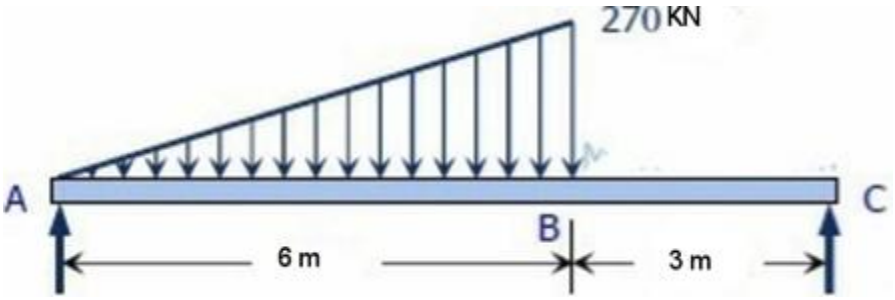
Q2)



Q3)



Q4)



Q.5) For the rigid frame loaded as shown in the given figure , draw the shear force and bending moment diagrams.