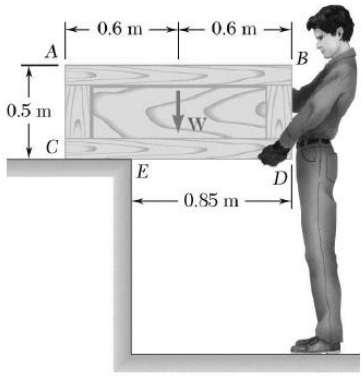
ES221 ENGINEERING MECHANICS I

Additional Problems-Set IV

Due Date: 10.11.2020

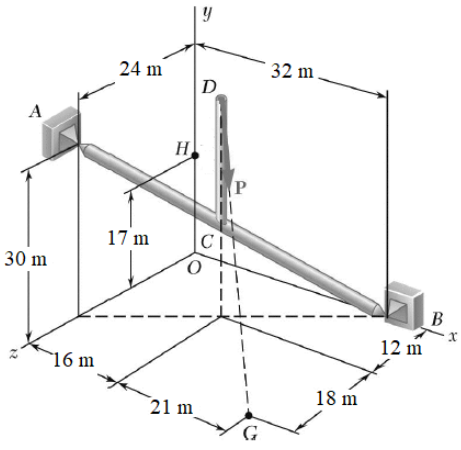
Q1) (30 pts)

A crate of mass 80 kg is held in position shown. Determine (a) the moment produced by the weight **W** of the crate about *E*, (b) the smallest force applied at *B* that creates a moment of equal magnitude and opposite sense about E.



Q2) (35 pts)

The 23-meter vertical rod *CD* is welded to the midpoint *C* of the 50-meter rod *AB*. Determine the moment about *AB* of the 470-N force **P**.



Q3) (35 pts)

The wire *AE* is stretched between the corners *A* and *E* of a bent plate. Knowing that the tension in the wire is 435 N, determine the moment about *O* of the force exerted by the wire (a) on corner *A*, (b) on corner *E*.