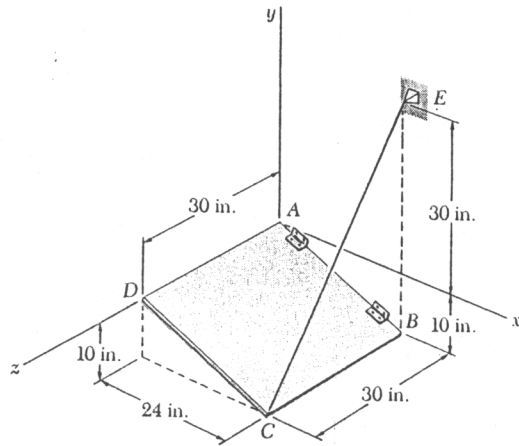
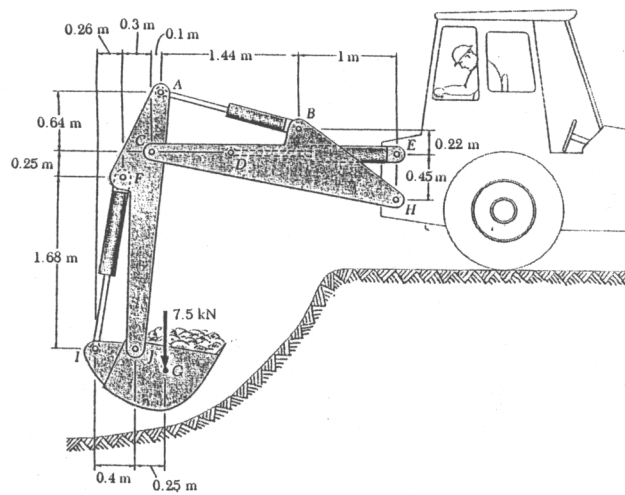


1. (40pts) The  $26 \times 30$  in. plate ABCD is supported by hinges along edge AB and by wire CE. Knowing that the plate is uniform and weight 100 lb, determine the tension in the wire.



2. (40pts) The motion of the backhoe bucket is controlled by the hydraulic cylinders AB, DE, and FI. Determine the force exerted by each cylinder in supporting the 7.5-kN load shown.



3. (20pts) Determine by direct integration the moment of inertia of the given area with respect to x and y axes.

