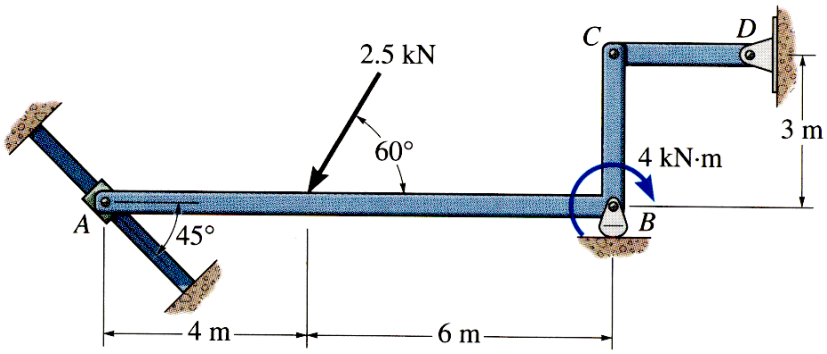
BE 50 - Statics - Winter 2005

Name:

Exam 2 – Rigid Bodies

Section: J

1. Beam *ABC* is supported by a smooth collar pinned at *A*, rocker at *B*, and short link *CD*. Determine the reactions (magnitude and direction) these supports exert on beam *ABC*.



Write legibly – box answers
Include proper units

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Exam 2 – Rigid Bodies

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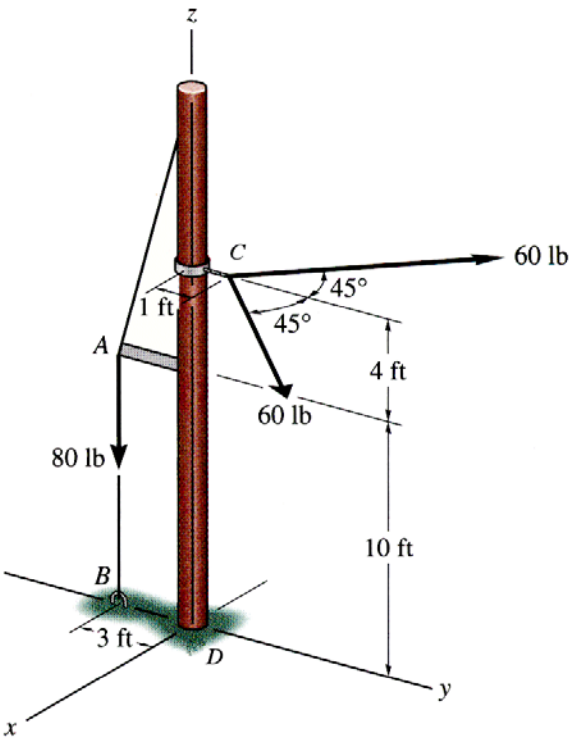
2. The pole is subjected to two cable forces of 60 lb, each lying in a plane parallel to the x-y plane. If the tension in guy wire *AB* is 80 lb, determine the reactions at the fixed base *D* of the pole due to these forces.



Write legibly – box answers
Include proper units

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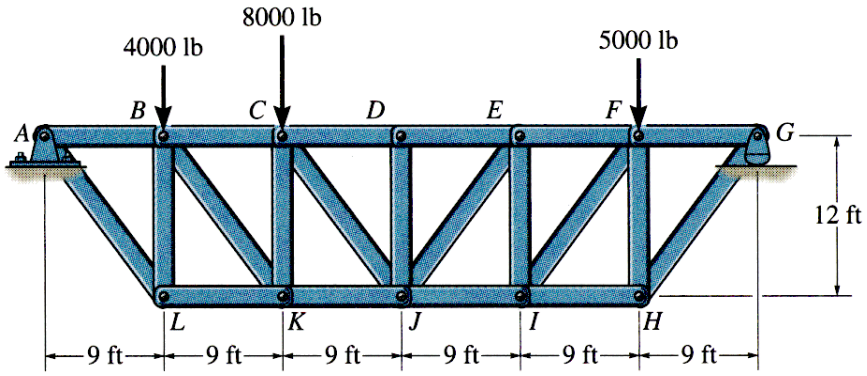
3. Determine the force in members *EI*, *JI*, and *CD* of the truss, and state whether these members are in tension or compression.



Write legibly – box answers
Include proper units

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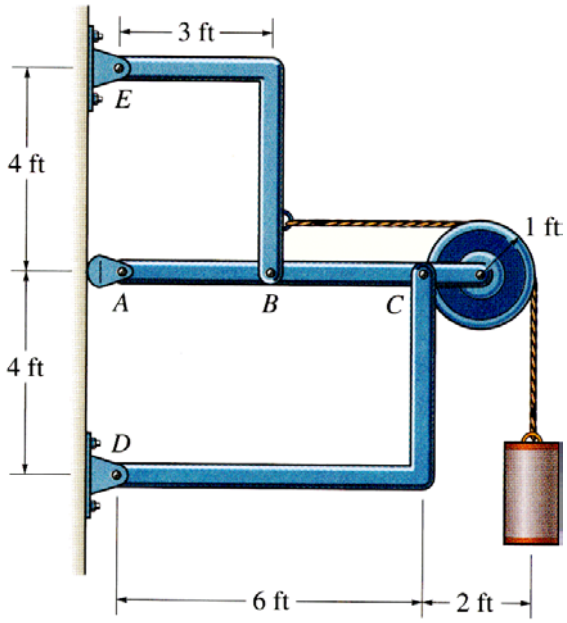
4. The suspended cylinder has a weight of 80 lb. Determine the reactions exerted on member *ABC* by the other components and draw these reactions on the picture of *ABC* below.



Write legibly – box answers
Include proper units