

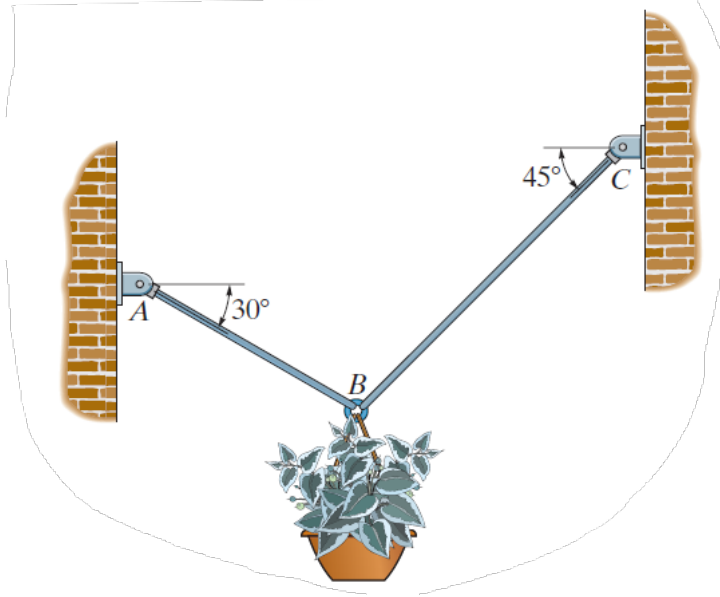
CME 260 – Mechanics of Materials
Exam #1 (01/26/2022)

Warrior ID # _____

Do one of the two problems shown below (the second problem is on the back).

Show your work (you will not receive any credit if all you have is a final answer, right or wrong).

1. A 50 kg flowerpot is suspended from wires AB and BC. The wires have a normal failure stress of $\sigma_{fail} = 350$ MPa. Determine the minimum diameter of each wire. Use a factor of safety (F.S.) of 2.5.



2. The double lap joint is assembled using two identical bolts. Determine the minimum diameter of the bolts if the shear failure stress is $\tau_{fail} = 350 \text{ MPa}$. Use a factor of safety (F.S.) of 2.5.

