***Homework H5.A***

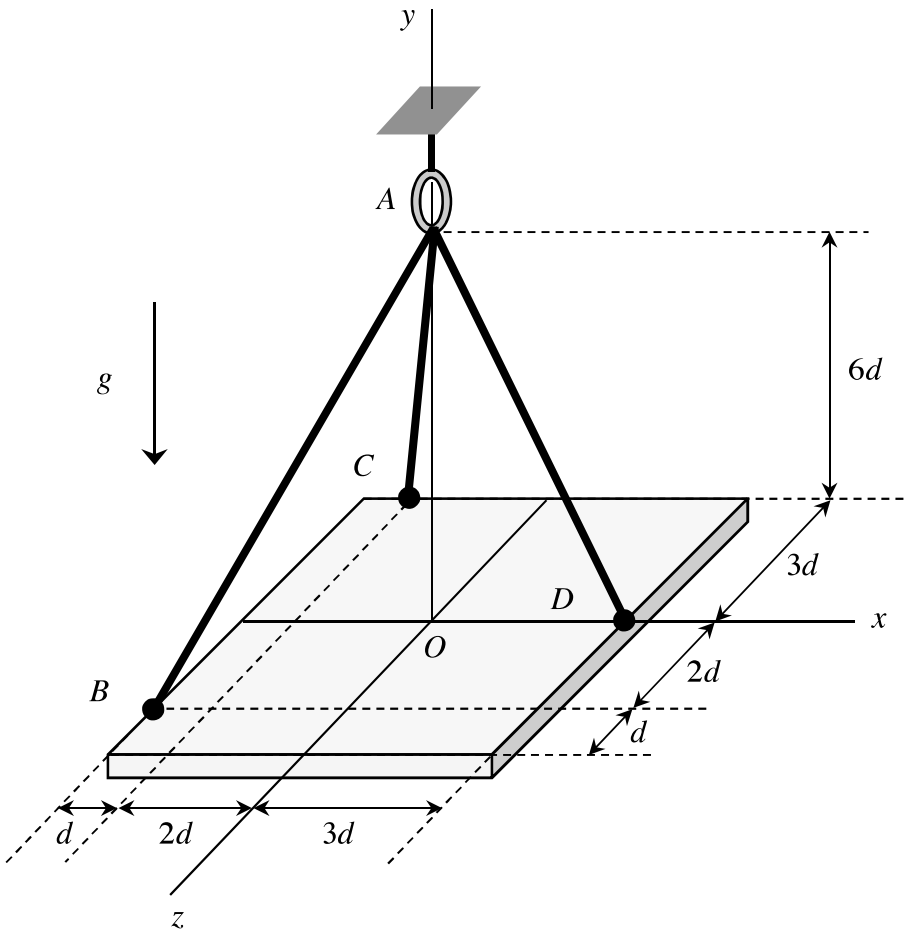
***Given***: A homogenous plate, having weight of $W$ and its center of mass at point O, is supported by three cables: AB, AC and AD. The plate center of mass O is directly below the support ring A. Each cable is capable of carrying a maximum tensile load of $T_{max}$ without failure.

***Find***:

a) Determine the tension in each cable in terms of the plate weight $W$.

b) Which cable carries the largest tension?

c) Determine the numerical value of the maximum plate weight that can be supported without failure. Express your answer in terms of $T_{max}$.



***Homework H5.B***

***Given***: A light fixture, having weight of *W*, is supported by three cables: CA, CB and CD.

***Find***: Determine the tension in each cable. Leave your answers in terms of the light fixture weight *W*.