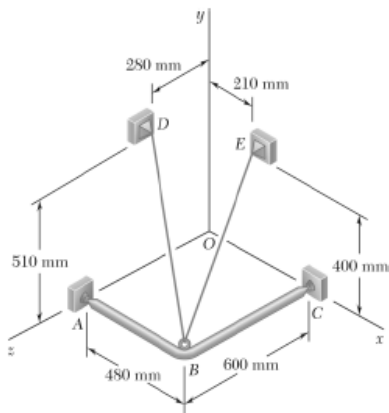




Assignment #2

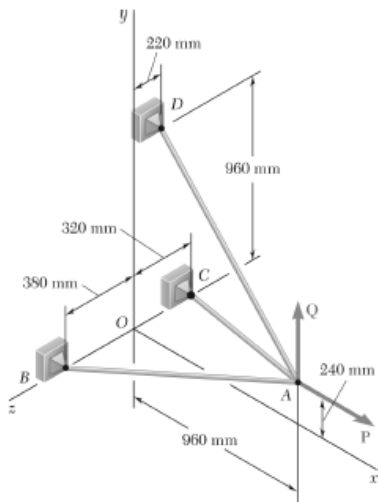
Dear students,

Below are the problems for this week. Please solve problems #2.107 and 2.123 and hand them in during the next DGD to your TA.



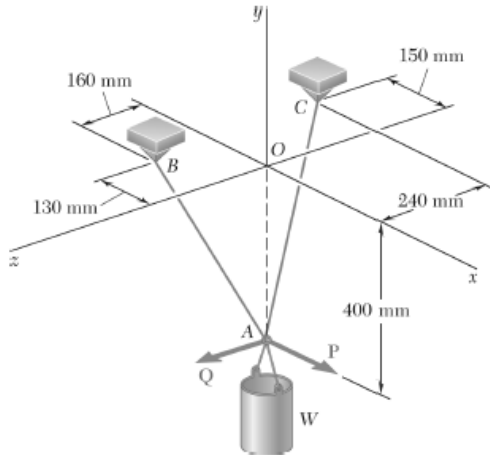
PROBLEM 2.89

A frame ABC is supported in part by cable DBE that passes through a frictionless ring at B . Knowing that the tension in the cable is 385 N, determine the components of the force exerted by the cable on the support at D .



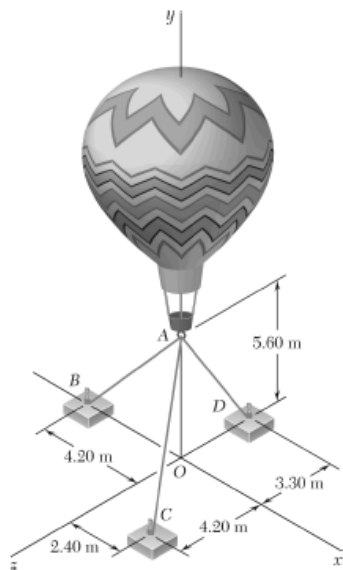
PROBLEM 2.107

Three cables are connected at A , where the forces P and Q are applied as shown. Knowing that $Q = 0$, find the value of P for which the tension in cable AD is 305 N.



PROBLEM 2.123

A container of weight W is suspended from ring A . Cable BAC passes through the ring and is attached to fixed supports at B and C . Two forces $\mathbf{P} = P\mathbf{i}$ and $\mathbf{Q} = Q\mathbf{k}$ are applied to the ring to maintain the container in the position shown. Knowing that $W = 376 \text{ N}$, determine P and Q . (*Hint:* The tension is the same in both portions of cable BAC .)



PROBLEM 2.136

Three cables are used to tether a balloon as shown. Determine the vertical force \mathbf{P} exerted by the balloon at A knowing that the tension in cable AC is 444 N .

Good luck,