

Al-Madinah International University

Faculty of Engineering,

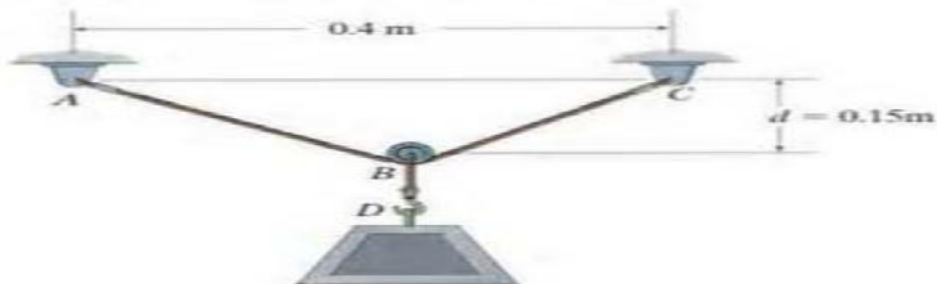
Civil Engineering Department

Applied Mechanics JAPD 1053

Homework Number 2 Due: December 03, 2014

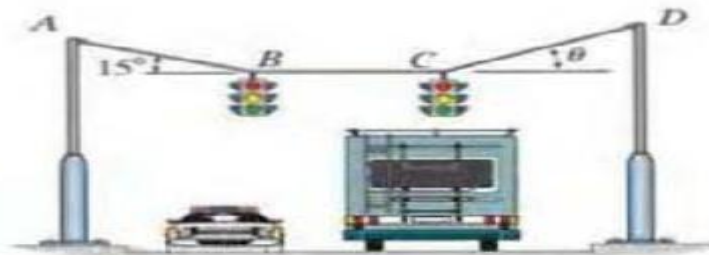
Answer all of the following problems; please follow the homework preparation guidelines provided on the course site: www.aast-compeng.info

F3-3. If the 5-kg block is suspended from the pulley B and the sag of the cord is $d = 0.15$ m, determine the force in cord ABC . Neglect the size of the pulley.



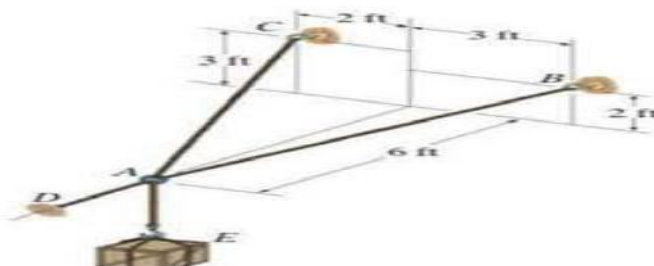
F3-3

F3-6. Determine the tension in cables AB , BC , and CD , necessary to support the 10-kg and 15-kg traffic lights at B and C , respectively. Also, find the angle θ .

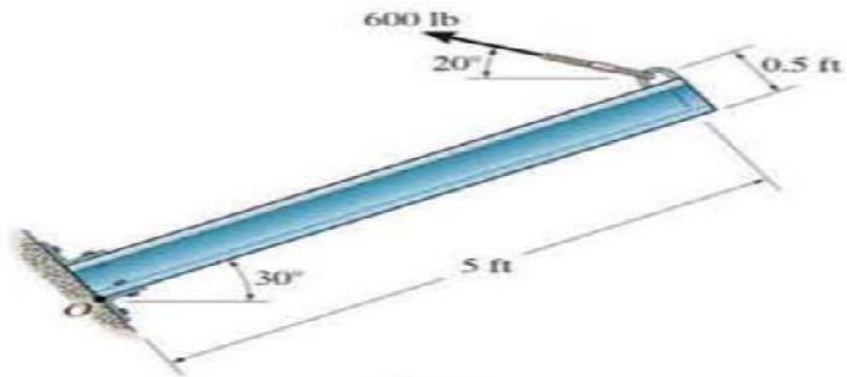


F3-6

F3-11. The 150-lb crate is supported by cables AB , AC , and AD . Determine the tension in these wires.

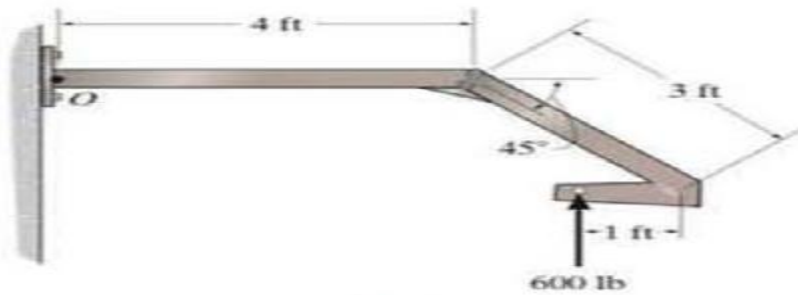


F4-1. Determine the moment of the force about point O .



F4-1

F4-4. Determine the moment of the force about point O .



F4-4

F4-10. Determine the moment of force \mathbf{F} about point O . Express the result as a Cartesian vector.

