AE 262 DYNAMICS

2013-2014 SPRING SEMESTER

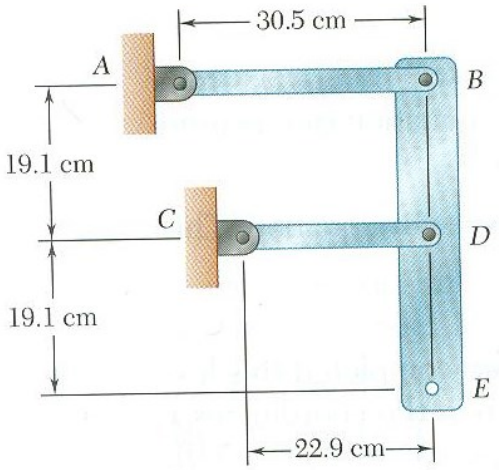
HOMEWORK #3

Given: 10.04.2014

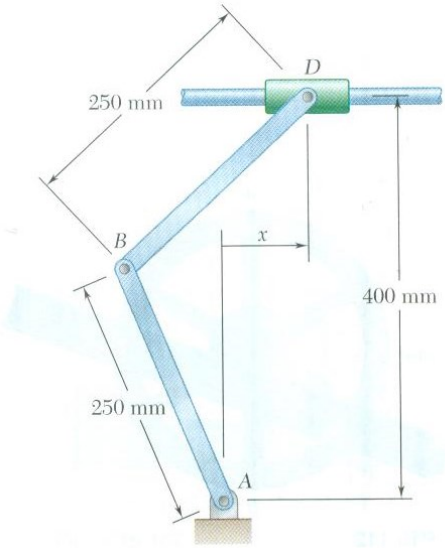
Due: 21.04.2014 at 17.30

Submit to: Tuğçe Garip

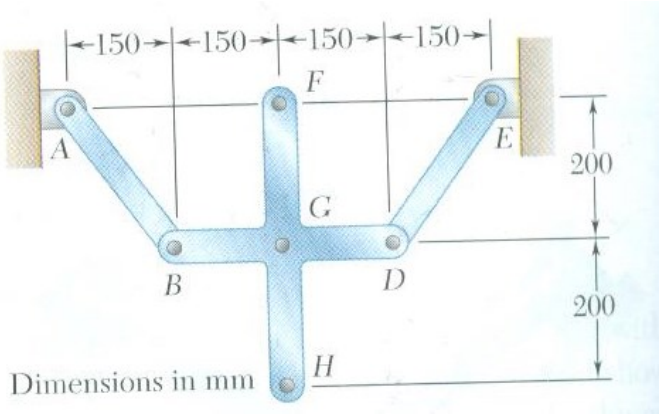
Q.1) Bar *BDE* is attached to two links *AB* and *CD*. Knowing that at the instant shown link *AB* rotates with a constant angular velocity of 3 rad/s clockwise, determine the acceleration ***(a)*** of point *D*, ***(b)*** of point *E*.



Q.2) Collar *D* slides on a fixed horizontal rod with a constant velocity of 0.6 m/s to the right. Knowing that at the instant shown x=0, determine ***(a)*** the angular acceleration of bar *BD*, ***(b)*** the angular acceleration of bar *AB*.



Q.3) The cross *BHDF* is supported by two links *AB* and *DE*. Knowing that at the instant shown link *AB* rotates with a constant angular velocity of 4 rad/s clockwise, determine ***(a)*** the angular velocity of the cross, ***(b)*** the angular acceleration of the cross, ***(c)*** the acceleration of point *H*.



Q.4) Collar *D* slides on a fixed vertical rod. Knowing that the disk has a constant angular velocity of 15 rad/s clockwise, determine the angular acceleration of bar *BD* and the acceleration of collar D when ***(a)*** Θ=0, ***(b)*** Θ=90°, ***(c)*** Θ=180°.