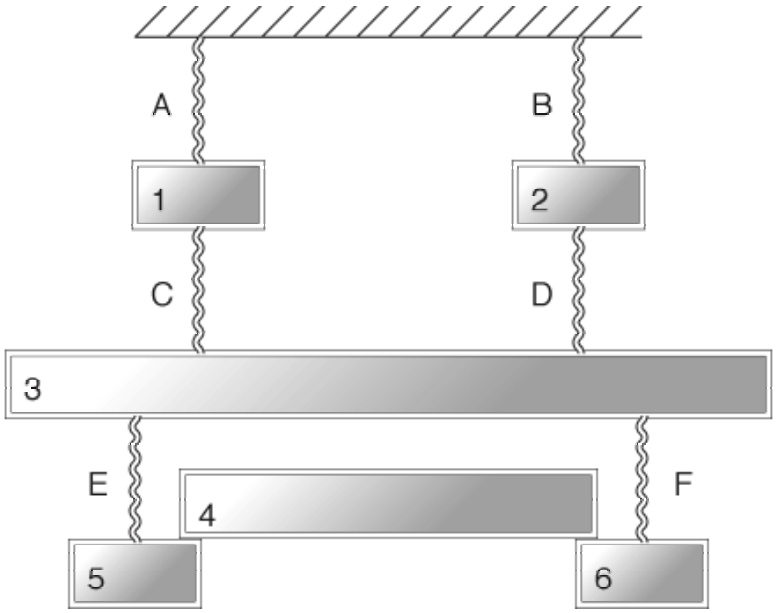
Quiz 2, ENGRD 202, Feb 14, 2003

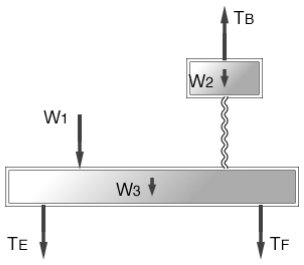
Name:_____

TA:_____

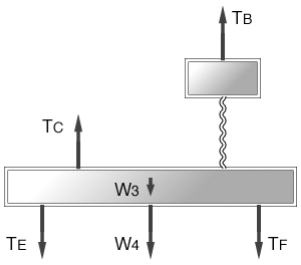
Section Day and time:_____

3) (7 points) Consider the "body" (system) consising of the masses 2 and 3 below and the cord D connecting them. One of the free body diagrams below is correct and the others are incorrect. Circle the correct diagram and clearly mark (and describe with a few words as if grading a student) one error on each of the bad free body diagrams.

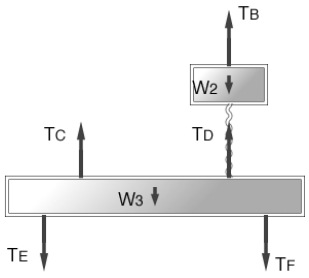




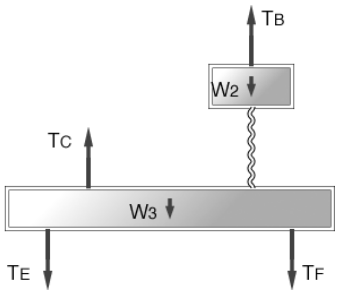
(a)



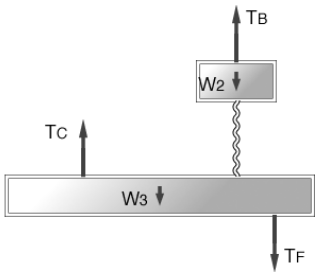
(b)



(c)

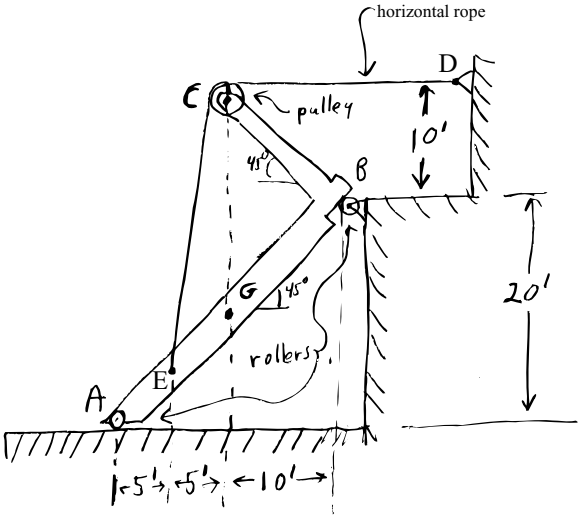


(d)



(e)

4) (10 pts) The center of mass of 200 pound structure AEGBC is at G. It is held by rollers at A and B as well as with the rope which starts at E, wraps around the pulley at C, and ends at D. Find the force of the ground on the structure at A and the tension in the rope. Define any base vectors you need.



$\underline{\mathbf{F}}_A =$

$T =$