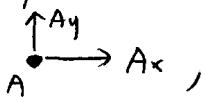



Grading Comments on TAM 202 HW#7, March 20, 2001

(1) 10 pts total (5 pts for each one)

(2) Common Errors =

① Problem 1 : Drawing a correct FBD for each component of a pipe wrench is the most important thing before you can set up the equilibrium equations. All the internal forces on each component have to be shown accurately on the FBDs, and they must be constant. For example, if you assume the internal force at pt A on part AC is , then the internal force at pt A on part DAB must be , which is equal but in the opposite direction as that on part AC. This is always true for all the internal forces.

If you made a mistake in drawing the direction of internal forces, it will lead you to a completely different result.

② Problem 2 : The difference between (a) and (b) is :

in (a) this person can be considered as a part of the bicycle when he is sitting on it, so that the 10 lb force is a internal force; however, in (b) this person is standing next to the bicycle, so that the 10 lb force is a external force to the bicycle.