Grading Comments on TAM 202, HW #6, March 14, 2001

(1) 10 pts total — ① 3 pts ② 1 pt ③ 1 pt.
④ 2 pts ⑤ 3 pts

(2) Common errors:

(a) In problem ①, some students still didn't know spring forces are vectors! If you could write forces in vector form correctly, then this problem is not difficult. Again, in order to do so, you need to find the coordinates for pts A, B, C, D, E.

(b) The mistake in problem ② was considering the effective stiffness of two different spring is the sum of their stiffnesses, i.e. $k = k_1 + k_2$, and also Δl is the same for both springs. However, there is no reason to make such assumption before you solve the problem.

(c) To find T_{EC} and T_{HB} in problem ④, the easier way is by taking the moment at certain pt or axis to avoid complicate calculation, as shown by solution.

(d) In Problem ⑤, by taking the moment at pt C, one can easily find the relationship between T and Mg, so as m and M. However, in part (c), most students forgot $\hat{i}$ and $\hat{j}$ were defined in the figure already and they are different than $\hat{j} \uparrow \longrightarrow \hat{i}$ which we define usually.

(3) Don't forget about drawing a FBD for every problem!