CE 201   STATICS (Sections 3 & 4)

First Semester 1430-31 / 2009-10 (**091**)

H.W. # 9

<u>**Due**</u> on Sunday 3-1-1431 / 20-12-2009 **(any time)**
<u>**Deadline**</u> for submission: **Monday 4-1-1431 / 21-12-2009** (<u>**before**</u> **you sit in class**)

1- The truss shown in Fig. P1 attaches one end of a stretcher to a rescue helicopter. If the stretcher exerts 60-lb vertical loads at *A* and *B,* what are the axial forces in members C*F, DF,* and *FG*? Use the method of joints. *State whether each member is in tension or compression.*   [Secs. 6.1, 6.2] (20 pts.)

2- Consider the truss shown in Fig. P2. Each member will safely support a tensile force of 6 kN and a compressive force of 2 kN. Based on this criterion, determine the largest weight *W* the truss will safely support.   [Secs. 6.1, 6.2] (30 pts.)

3- By inspection, determine all zero-force members in the truss shown in Fig. P3 for the given loading.
          [Sec. 6.3] (10 pts.)

4- Use the method of sections to determine the force in member *CJ* of the truss shown in Fig. P4. The horizontal members are each 1 m in length. *State whether it is in T or C*.   [Sec. 6.4] (15 pts.)

5- Consider the truss shown in Fig. P5. The load *F* = 50 kN and the length *L* = 2 m. Use the method of sections to determine the axial forces in members *DH* and *GJ*.   [Sec. 6.4] (25 pts.)
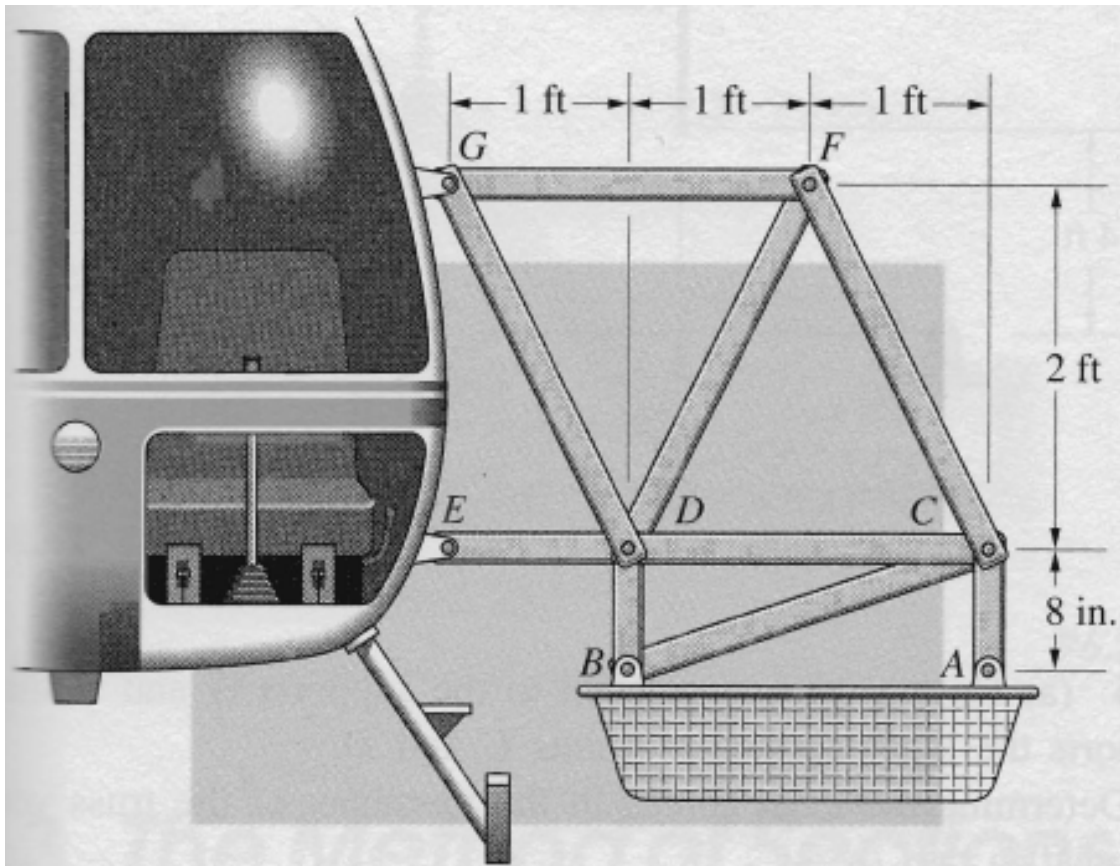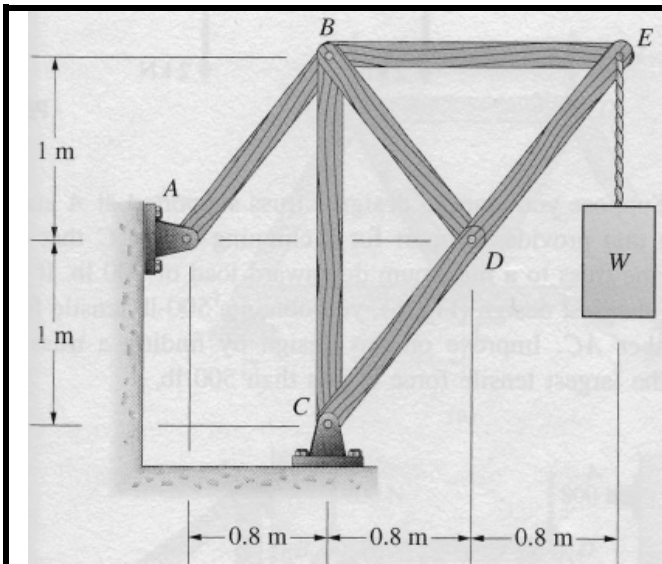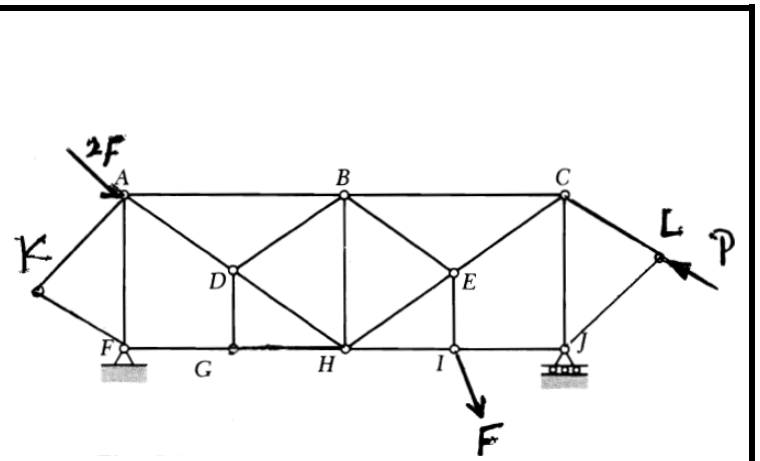

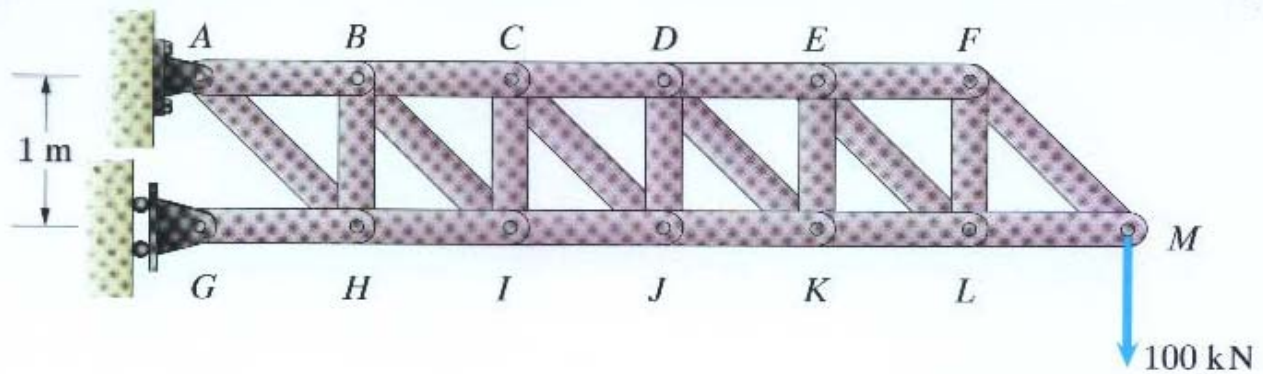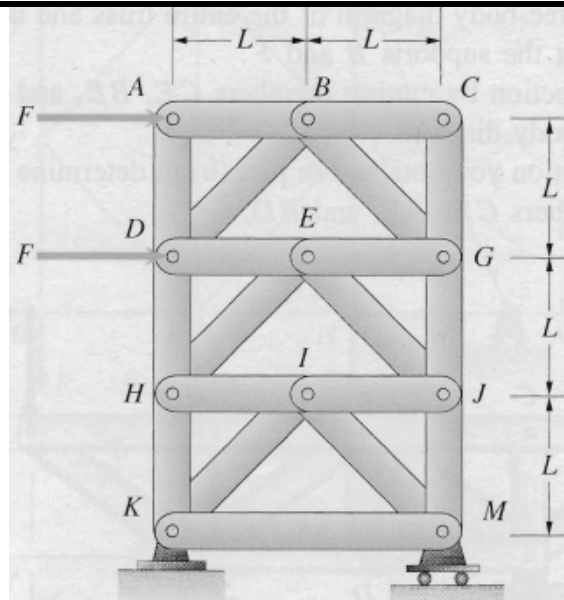**Fig. P1**

Fig. P2

Fig. P3

Fig. P4

Fig. P5

Do your work yourself!! Remember that the homework carries more than 10% of the course grade; in addition, *solving it is the best way to understand the subject.* *Of course, you can seek my help anytime in the homework as well as in anything else.*

As an engineer, **review the guidelines for submitting homework assignments given to you in class BEFORE you start solving and writing the homework. FOLLOW ALL THESE GUIDELINES.** *Cheating, copying, etc. is ………….!!!!!!*