

CE 201 STATICS (Sections 4 & 6)

First Semester 1429-30 / 2008-09 (081)

H.W. # 8

Due on Sunday 23-12-1429 / 21-12-2008 (any time)

Deadline for submission: **Monday 24-12-1429 / 22-12-2008 (before you sit in class)**

- 1- Use the method of joints to determine the forces in members BD , BE , and BG of the truss shown in Fig. P1. State whether each member is in tension or compression. [Secs. 6.1 , 6.2] (20 pts.)
- 2- In the truss shown in Fig. P2, each member can safely support a tensile force of 28 kN and a compressive force of 12 kN. Based on these criteria, what is the largest safe value of F ? [Secs. 6.1 , 6.2] (30 pts.)
- 3- By inspection, determine all zero-force members in the trusses shown in Fig. P3 a & b for the given loading. [Sec. 6.3] (15 pts.)
- 4- In the Warren truss shown in Fig. P4, the walkway exerts vertical 10-kip loads at B , D , F , and H . The supports at A and I can be modeled as roller supports. Use the method of sections to determine the forces in members DF , DE , and CE . State whether each member is in tension or compression. [Sec. 6.4] (20 pts.)
- 5- Use the method of sections to determine the forces in members DG and BE of the K -truss shown in Fig. P5. [Sec. 6.4] (15 pts.)

Fig. P1

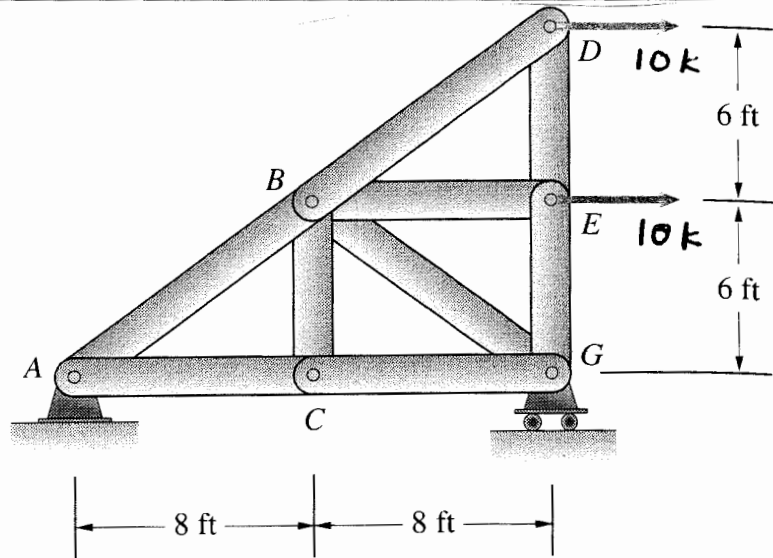
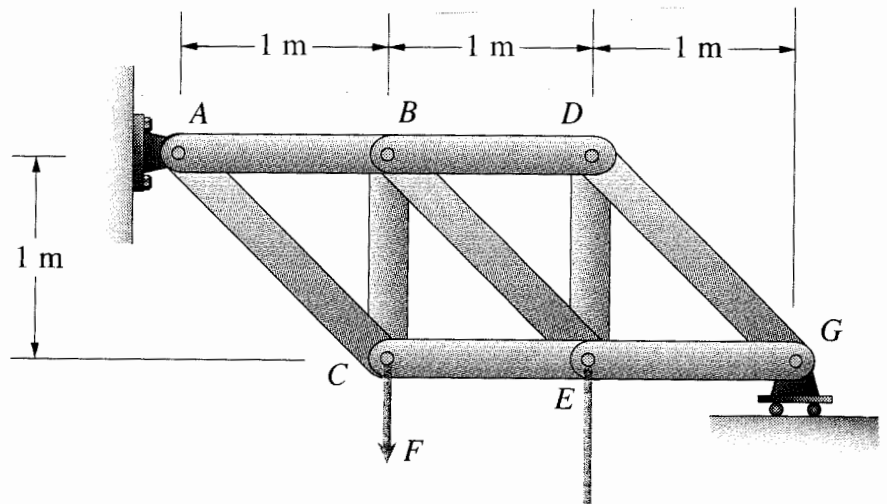
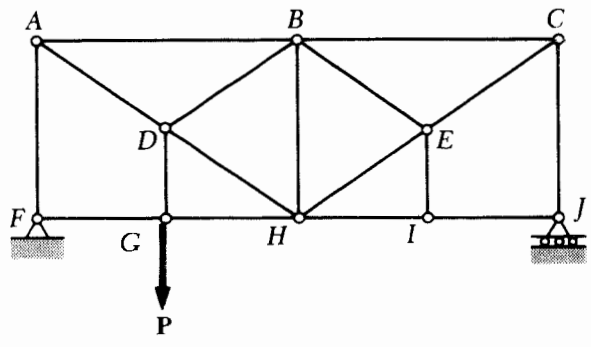


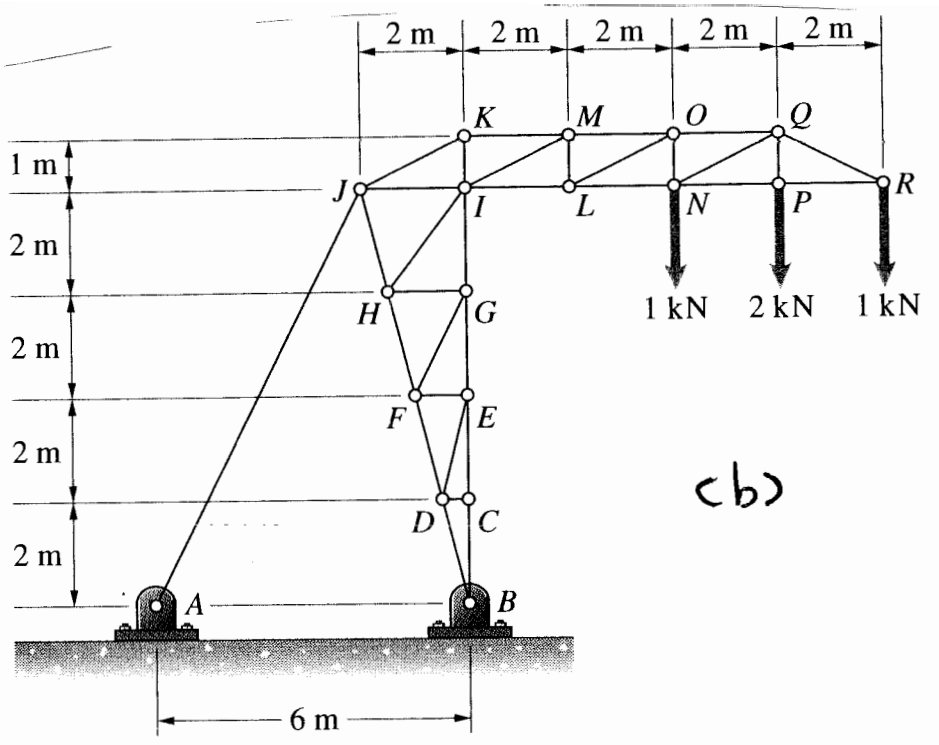
Fig. P2





(a)

Fig. P3



(b)

Fig. P4

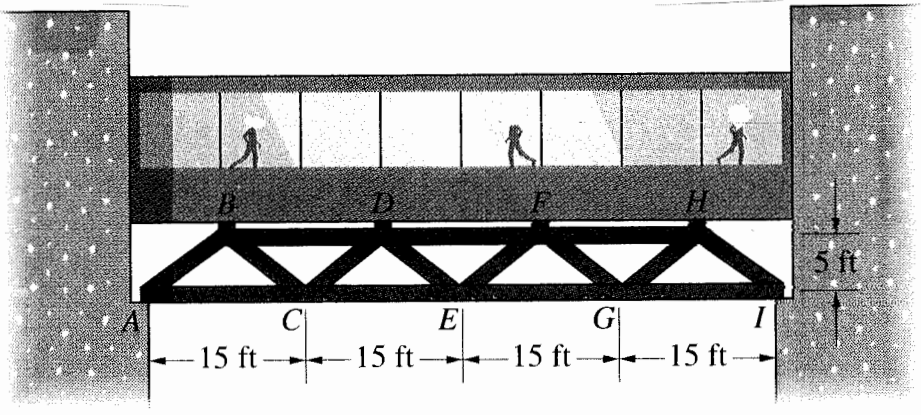
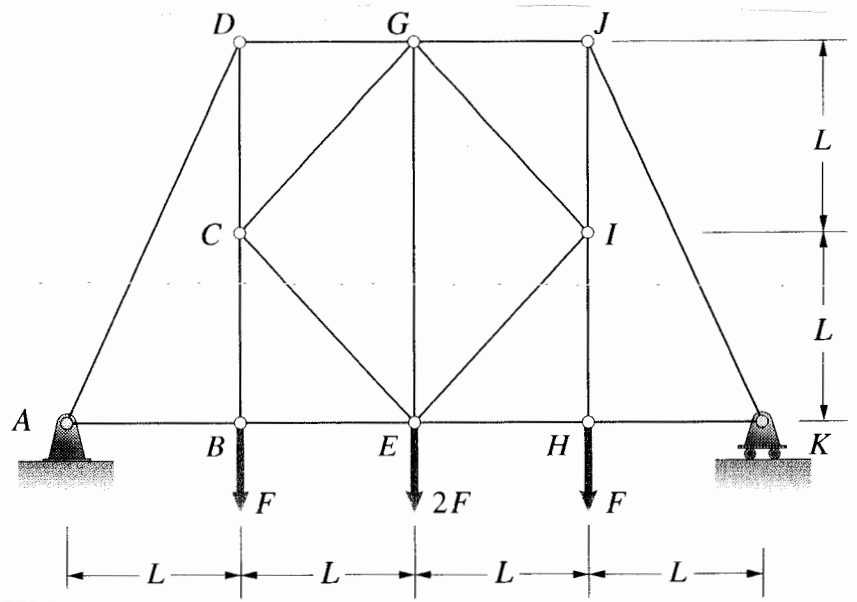


Fig. P5



Do your work yourself!! Remember that the homework carries about 15% 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.**