

King Fahd University of Petroleum & Minerals  
CIVIL ENGINEERING DEPARTMENT

CE 201 STATICS (Section 9)  
First Semester 1427-28 / 2006-07 (061)

H.W. # 6

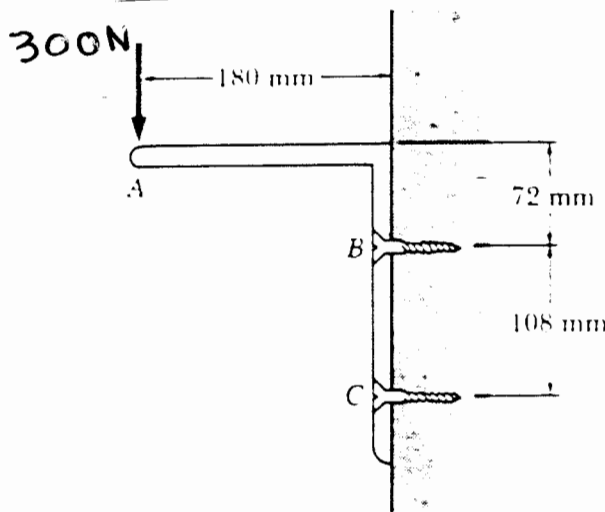
**Due** on Sunday 14-10-1427 / 5-11-2006 (**any time**)

**Deadline** for submission: Monday 15-10-1427 / 6-11-2006 (**before you sit in class**)

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- 1- In Fig. P1 shown,
    - a) replace the 300-N force by an equivalent force-couple system at B;
    - b) find the two horizontal forces at B and C which are equivalent to the couple obtained in part (a).[Secs. 4.7, 4.8] (20 pts.)
  - 2- The tension in cable AB shown in Fig. P2 is 13 kN. Replace the force exerted by the cable at A by an equivalent force-couple system at O. [Secs. 4.7, 4.8] (20 pts.)
  - 3- Determine the magnitude and location of the resultant of the distributed load shown in Fig. P3. [Sec. 4.10] (20 pts.)
  - 4- Determine the magnitude and location of the resultant of the distributed load shown in Fig. P4. [Sec. 4.10] (20 pts.)
  - 5- Draw *complete and clear free body diagrams* for members ACD shown in Fig. P5 A and ACB shown in Fig. P5 B. [Secs. 5.1-5.3] (20 pts.)
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Fig. P1



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**Do your work yourself!!** Remember that the homework carries 20% 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.

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As an engineer, review the guidelines for submitting homework assignments given to you in class **BEFORE** you start solving and writing the homework. **DO NOT** SUBMIT THE HOMEWORK IF YOU DO NOT FOLLOW THESE GUIDELINES. Cheating, copying, etc. is .....!!!!!!

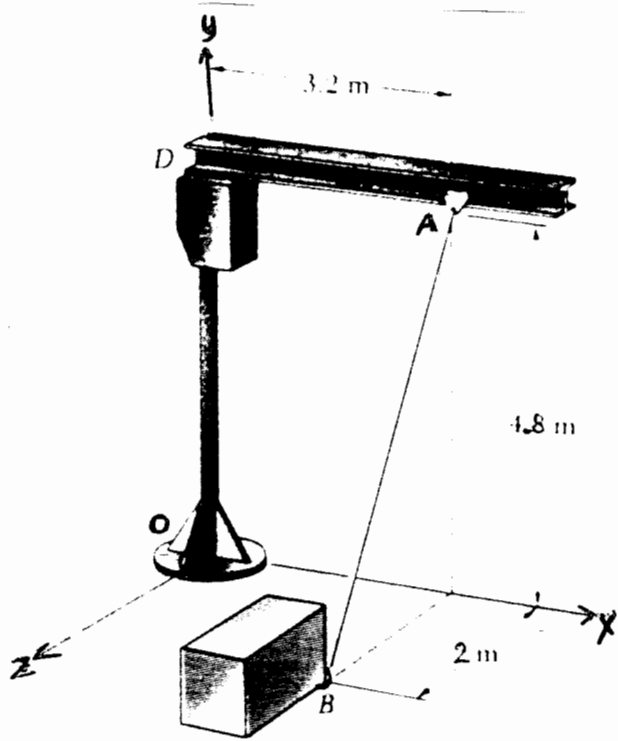


Fig. P2

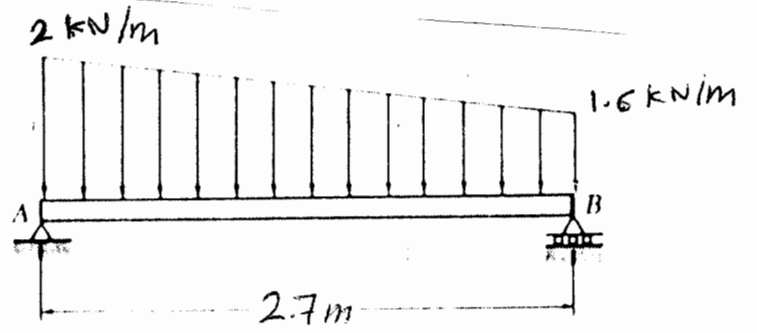


Fig. P3

Fig. P4

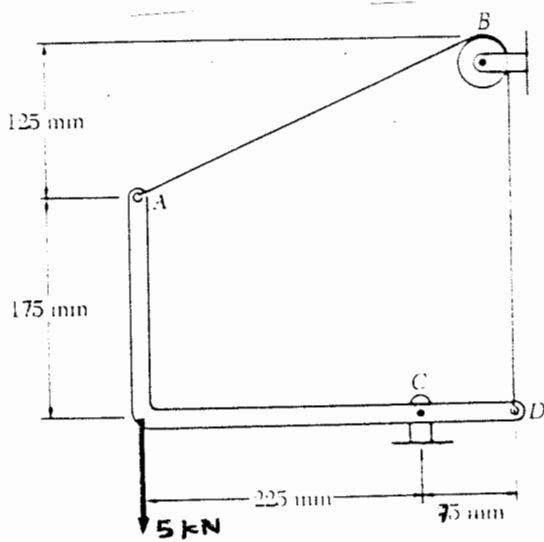
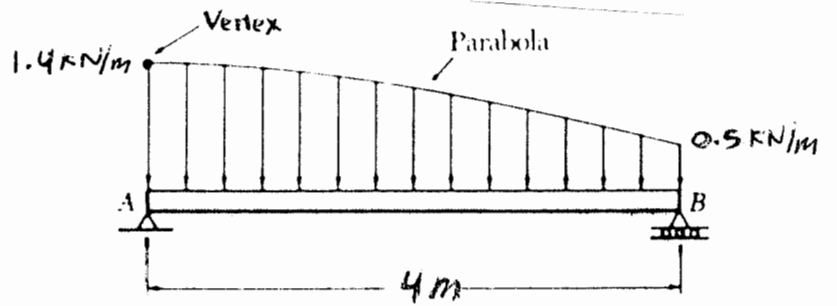


Fig. P5 A

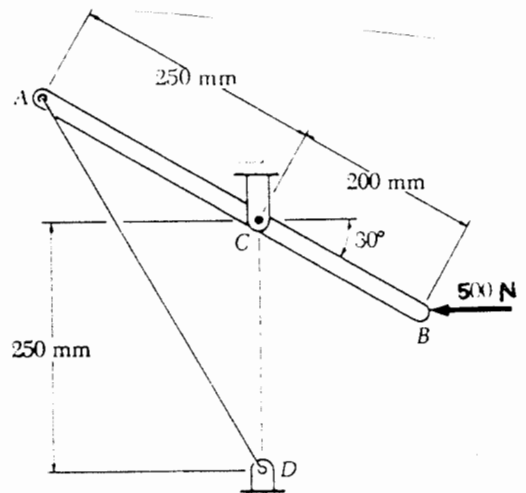


Fig. P5 B