

King Fahd University of Petroleum & Minerals
CIVIL ENGINEERING DEPARTMENT

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

H.W. # 2

Due on Sunday 1-9-1427 / 24-9-2006 (any time)

Deadline for submission: Monday 2-9-1427 / 25-9-2006 (**before you sit in class**)

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- 1- Determine the value and direction of the resultant of the two forces shown in Fig. P1 below. [Secs. 2.5, 2.6] (25 pts.)
 - 2- In Fig. P2 below, the tension is 1425 N in cable AB and 2130 N in cable AC. Determine the magnitude and direction of the resultant force exerted at A by the two cables. [Secs. 2.7, 2.8] (25 pts.)
 - 3- Determine the angle formed by cables AC and AD in Fig. P3 shown. [Sec. 2.9] (20 pts.)
 - 4- In Fig. P4 shown, the tension in cable AD is 540 N. Determine
 - a) the angle between cable AD and boom AB,
 - b) the projection on AB of the force exerted by cable AD at point A by
 - i- utilizing the result of part (a) above,
 - ii) the general method (i.e., assuming the angle in (a) is not known/found). [Sec. 2.9] (30 pts.)
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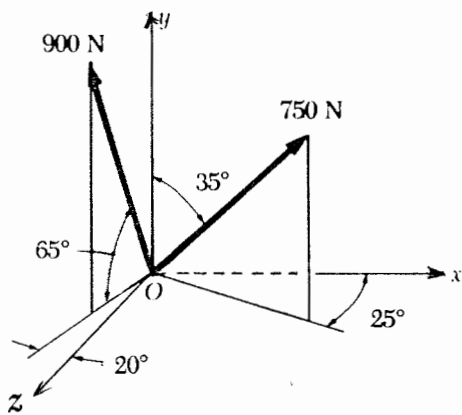


Fig. P1

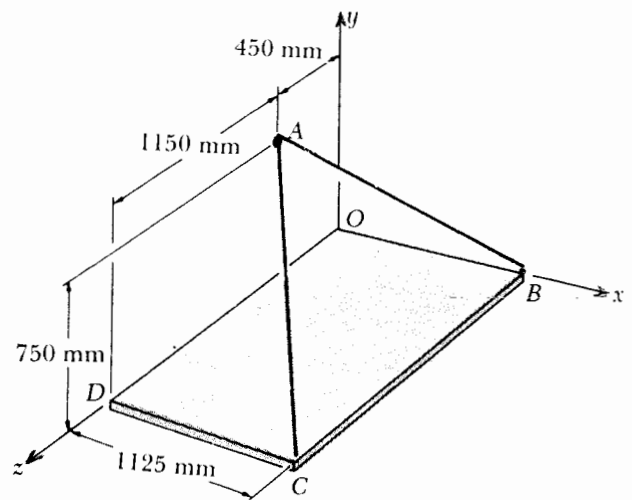


Fig. P2

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.

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!!!!!!

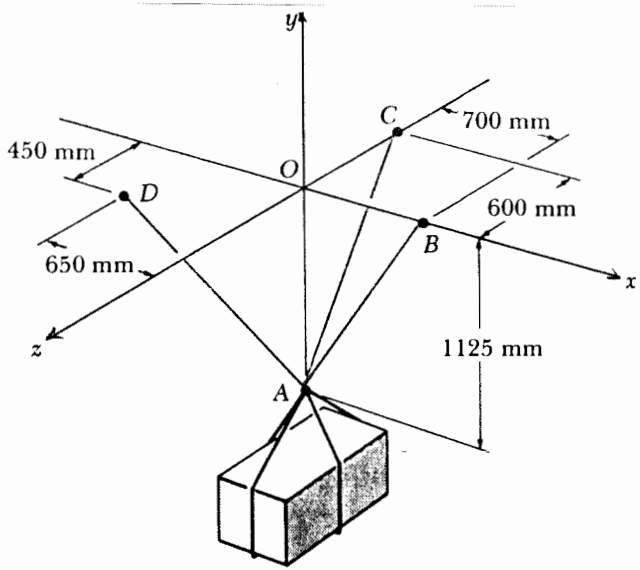


Fig. P3

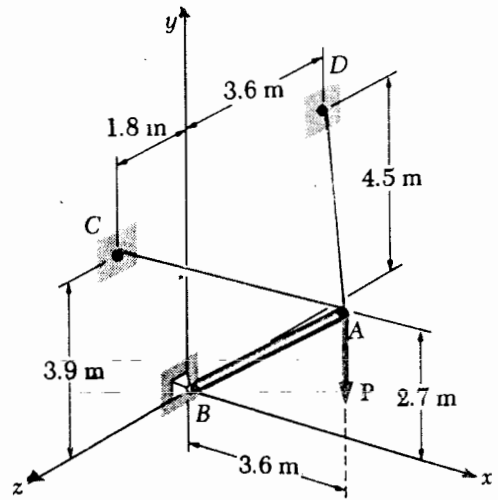


Fig. P4