

King Fahd University of Petroleum & Minerals  
 CIVIL ENGINEERING DEPARTMENT

CE 201 STATICS (Sections 4 & 6)

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

H.W. # 1

**Due** on Sunday 19-10-1429 / 19-10-2008 (any time)

**Deadline** for submission: **Monday 20-10-1429 / 20-10-2008 (before you sit in class)**

- 1-\* Determine the value and direction of the resultant of the two forces shown in Fig. P1 below. [Sec. 2.3] (15 pts.)
- 2-\* Resolve the force shown in Fig. P2 below into two components acting along the lines *aa* and *bb*. [Sec. 2.3] (15 pts.)
- 3-\* Determine the magnitude and direction of the resultant of the three forces shown in Fig. P3 below. [Sec. 2.3] (25 pts.)
- 4- Determine the magnitude and direction of the resultant of the three forces shown in Fig. P4 below. [Sec. 2.4] (20 pts.)
- 5- Determine the magnitude and direction of  $F_3$  shown in Fig. P5 so that the resultant of the three forces is directed along the *a* axis and has a magnitude of 100 kN. [Sec. 2.4] (25 pts.)

**\*Note:** Use the method of Section 2.3 to solve problems 1, 2, and 3. **DO NOT** use Cartesian vectors; no credit will be given if you use them.

Fig. P1

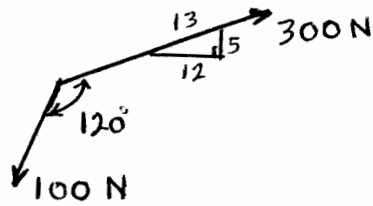


Fig. P2

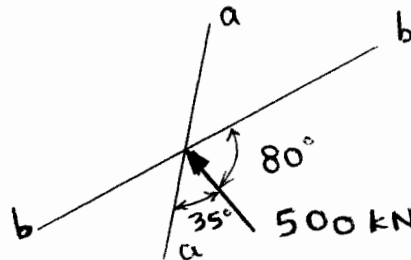


Fig. P3

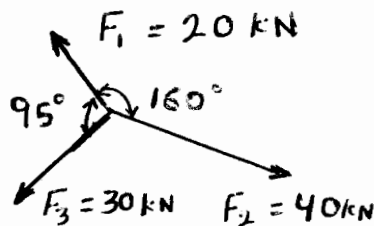


Fig. P4

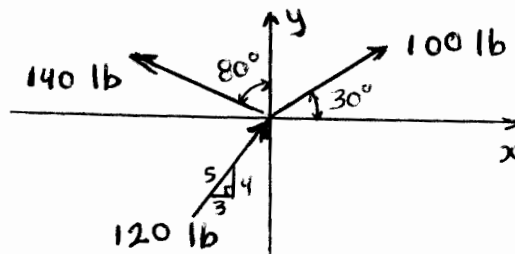
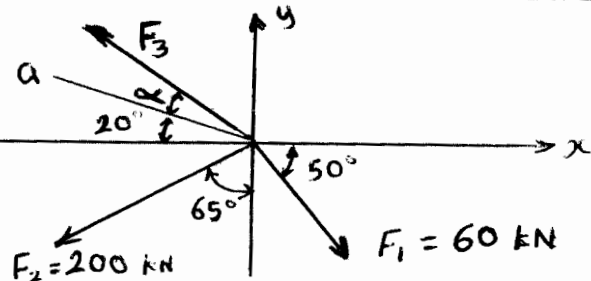


Fig. P5



**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.** Cheating, copying, etc. is .....!!!!!!