King Fahd University of Petroleum & Minerals
CIVIL ENGINEERING DEPARTMENT

CE 201 STATICS (Sections 3 & 4)

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

H.W. # 13

Due on Sunday 9-2-1431 / 24-1-2010 **(any time)**

Deadline for submission: **Monday 10-2-1431 / 25-1-2010** (**before you sit in class**)

1- If a string is tied to the slender bar at *A*, shown in Fig. P1, and the bar is allowed to hang freely, what will be the angle between *AB* and the vertical? [Secs. 9.1- 9.3] (20 pts.)

2- Locate the **centroid** of the shaded area shown in Fig. P2. [Secs. 9.1- 9.3] (15 pts.)

3- Derive a formula for the **centroid** of the shaded volume shown in Fig. P3. [Secs. 9.1- 9.3] (15 pts.)

4- Locate the **centroid** of the shaded volume shown in Fig. P4. [Secs. 9.1- 9.3] (25 pts.)

5- Locate the **centroid** of the shaded volume shown in Fig. P5. [Secs. 9.1- 9.3] (25 pts.)

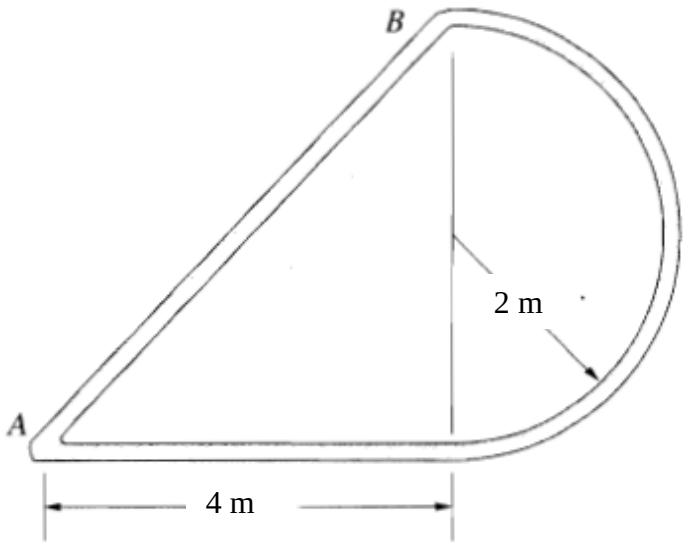


Fig. P1

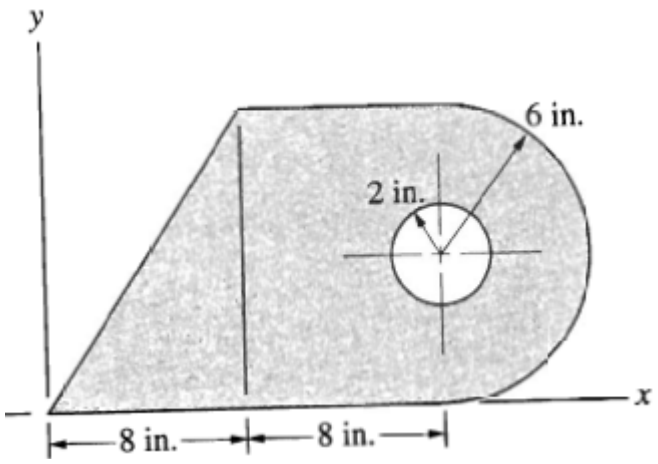


Fig. P2

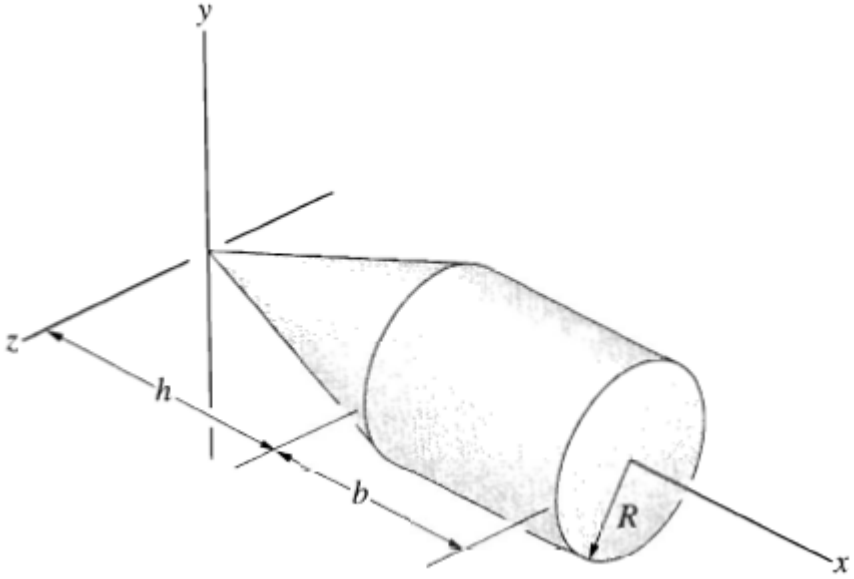
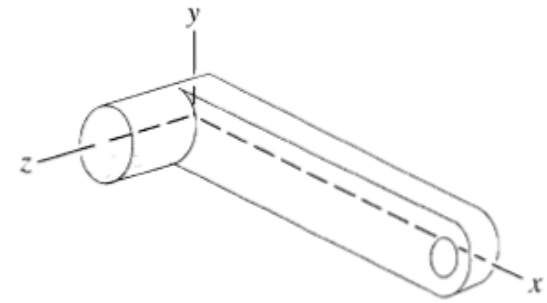
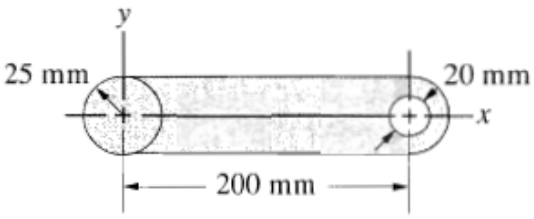
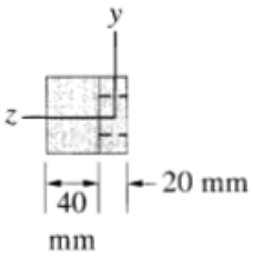


Fig. P3



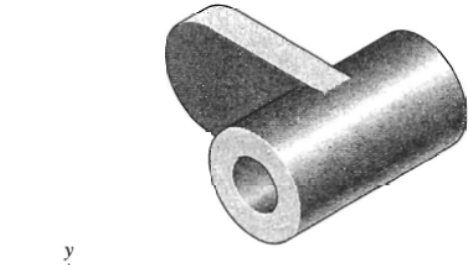


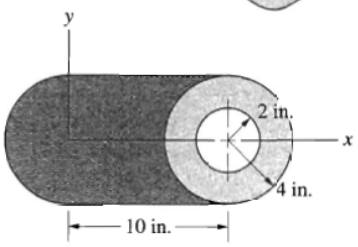
SIDE VIEW



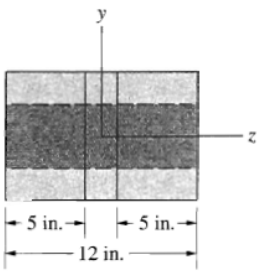
END VIEW

Fig. P4





SIDE VIEW



FRONT VIEW

Fig. P5

Do <u>your</u> work *<u>yourself</u>*!! 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 <u>engineer</u>*, review the <u>guidelines for submitting homework assignments</u> given to you in class <u>BEFORE</u> you start solving and writing the homework. FOLLOW <u>*ALL*</u> THESE GUIDELINES. <u>*Cheating, copying, etc. is ……!!!!!!*</u>**