

King Fahd University of Petroleum & Minerals
CIVIL ENGINEERING DEPARTMENT

CE 201 STATICS (Section 8)
Second Semester 1424-25 / 2004 (032)

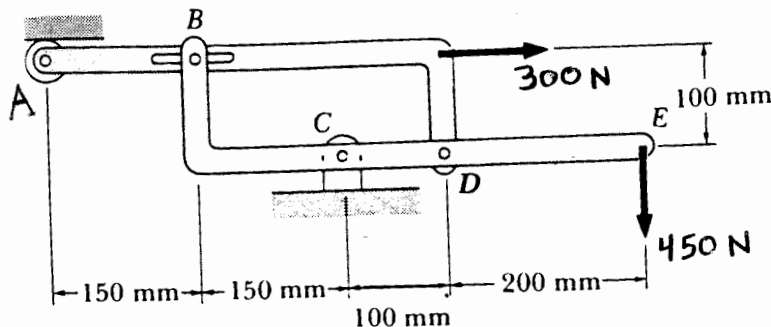
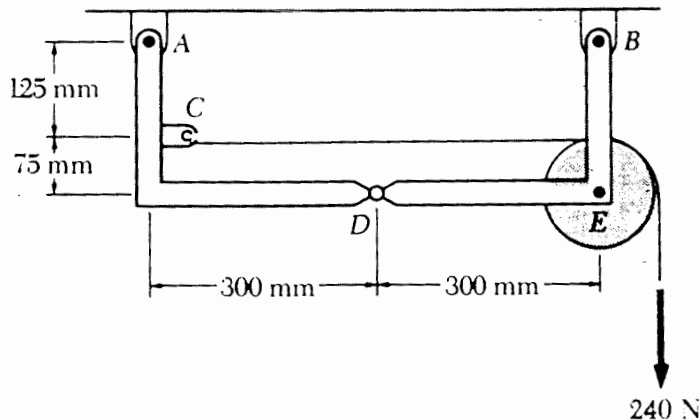
H.W. # 10

Due on Sunday 6-3-1425 / 25-4-2004 (any time)

Deadline for submission: Monday 7-2-1425 / 26-4-2004 (**before you sit in class**)

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- 1- Determine the reactions in Fig. P1 below. The radius of the smooth pulley is 75 mm. [Sec. 6.6] (15 pts.)
 - 2- In Fig. P2 below, determine the components of all forces acting on member BCDE. [Sec. 6.6] (15 pts.)
 - 3- The action of the roll clamp shown in Fig. P3 below is controlled by the two hydraulic cylinders. In order to hold firmly the 2000-kg roll, a vertical 6-kN force is applied at the top of the roll by arm CAF. Determine the force exerted by each cylinder and the force exerted at C on arm BCEH. [Sec. 6.6] (25 pts.)
 - 4- Shown in Fig. P4 below, a hand-operated hydraulic cylinder has been designed for use where space is severely limited. Determine the magnitude of the force exerted on the piston at D when the two 450-N forces are applied. [Sec. 6.6] (25 pts.)
 - 5- Determine the internal forces at point J in Fig. P5 below. (*Think about the direction of the section you take!!*) [Sec. 7.1] (20 pts.)

You have to do all problems by yourself only. *Of course you can seek my help anytime in the homework as well as in anything else.*



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*!!!!!!

