工程力學

Exam. # 3 (12/19/2013)

1. (20pts) Using the method of joints, determine the force in each member of the truss shown in **Fig. 1**. State whether each member is in tension or compression.

2. (20pts) Determine the force in members *EH* and *GI* of the truss shown in **Fig. 2.** (Hint: use section *aa*.).

3. (20pts) For the frame and loading shown in **Fig. 3**, determine the reactions at *B* and *F*.

4. (20pts) Determine the magnitude of the gripping forces produces when two 300-N forces are applied as shown in **Fig. 4**.

5. (20pts) A 12-m length of railroad rail of weight N/m is lifted by the tongs (火鉗) shown in **Fig. 5**. Determine the forces exerted at *D* and *F* on the tong *BDF*.

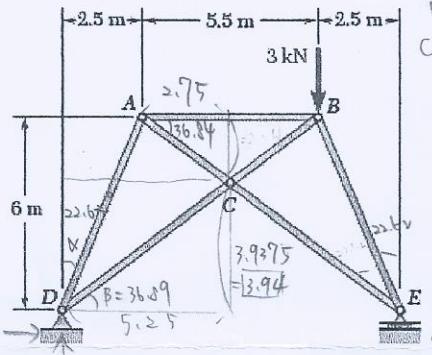

Fig. 1

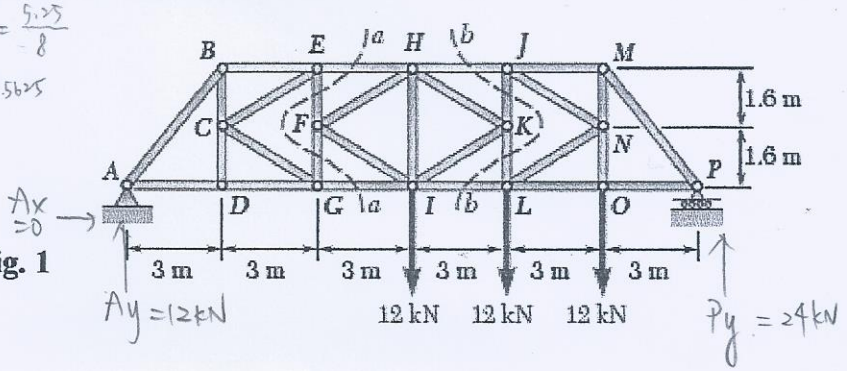

Fig. 2

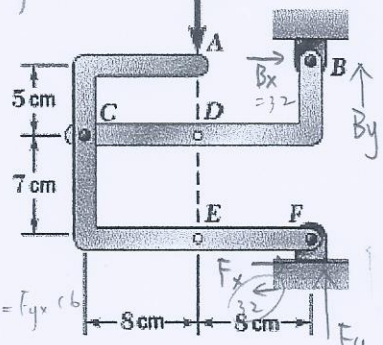

Fig. 3

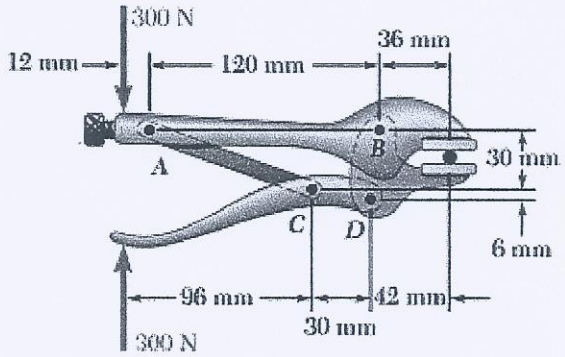

Fig. 4

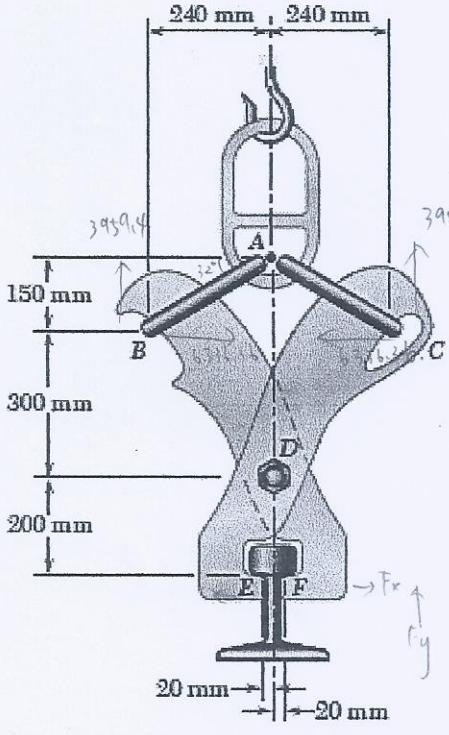

Fig. 5