

Mechanics of Materials (Group A) [09:00~10:30]

Examinee's number _____

Score _____

I Answer the following questions for Fig. 1.

(25 points)

- (1) Find the elongations of the elastic bars AB, CD, EF, and EG. Here, the axial forces of elastic bars AB, CD, EF, and EG are defined as Q , R , S , and T , respectively.
- (2) Assuming that the bar AB is a rigid body, find the axial forces Q , R , S , and T .
- (3) Assuming that the bar AB is an elastic bar, find the axial forces Q , R , S , and T .

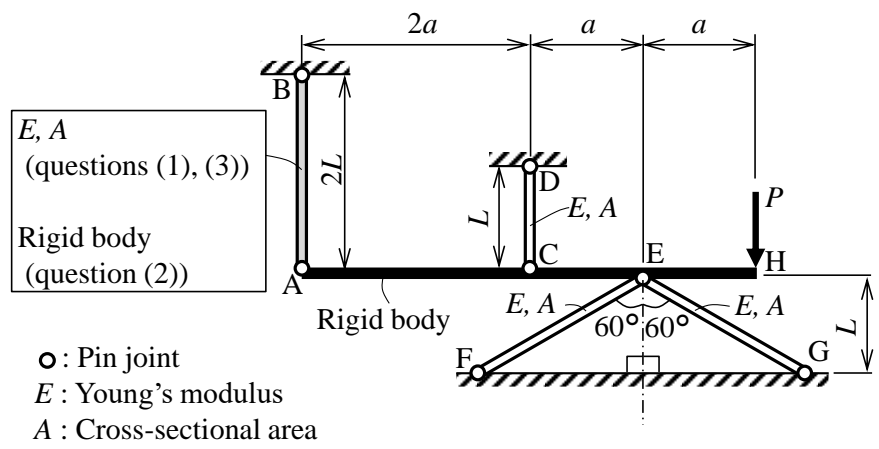


Fig. 1

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II Answer the following questions for Fig. 2. (25 points)

- (1) Find the angles of twist at Points B and C.
- (2) Find the displacements in the y direction at Points B and C.
- (3) Find the displacements in the y direction at Points D and E.

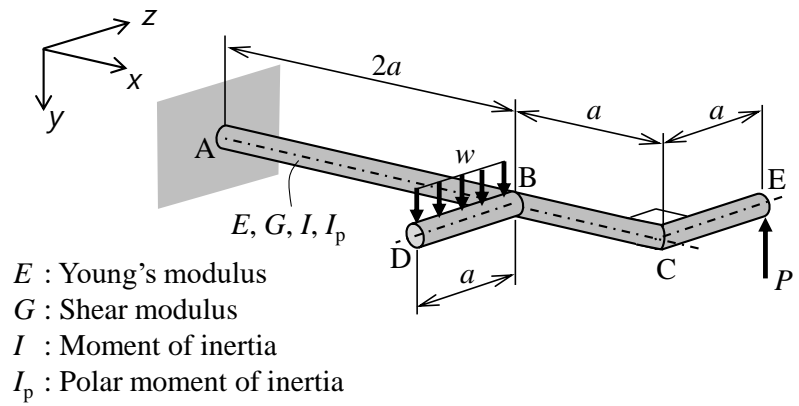


Fig. 2