

Homework Problem H8.A

Given: A T-shaped structural member is fixed to ground at end D. A cable is attached to point C on the member, is wrapped around an ideal pulley at B, and is connected to ground at end A. The cable carries a known pre-tension of T . Both sections of the cable not in contact with the pulley are horizontal. The member supports a block of weight W at end E. Assume the weight of the member and pulley to be negligible compared to the applied loads.

Find: Determine the reactions acting on the member at end D. Express your answers in terms of W , T and R .

