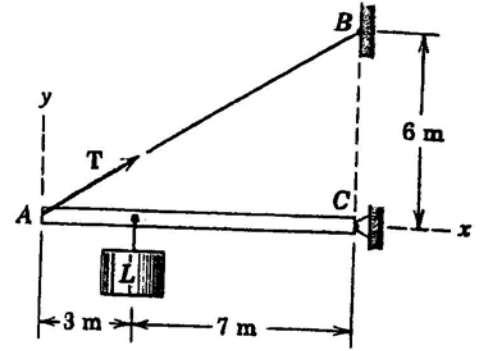
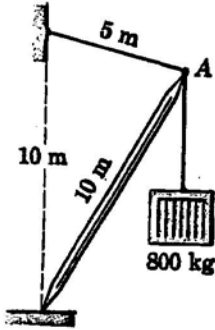


2/3 When the load L is 7 m from the pivot at C , the tension T in the cable has a magnitude of 15 kN. Express T as a vector using the unit vectors i and j .



Problem 2/3

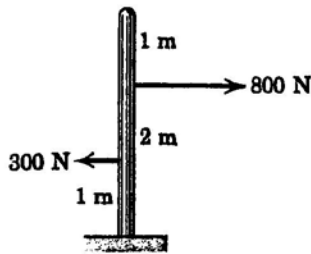
2/6 The tension T in the vertical cable equals the weight of the crate. Calculate the components T_t and T_n along and normal to the boom, respectively, of the force T applied to the boom at A by the crate.



Problem 2/6

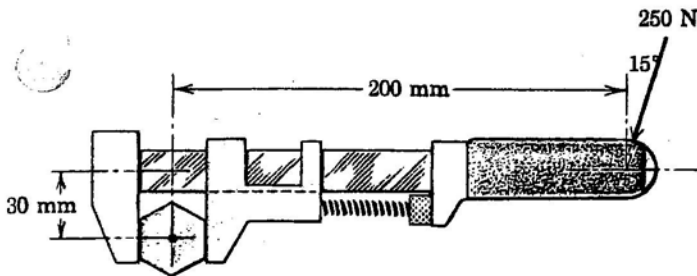
2/30 Determine the distance y down from the top of the pole at which a single horizontal force P must be applied in order to duplicate the external effects of the two given forces.

Ans. $y = 0.4$ m



Problem 2/30

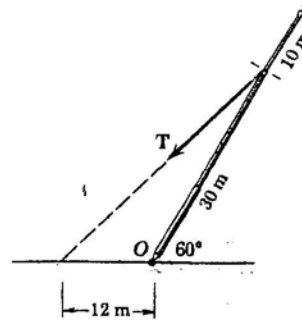
2/31 Calculate the moment of the 250-N force on the handle of the monkey wrench about the center of the bolt.



Problem 2/31

2/34 In raising the flagpole from the position shown, the tension T in the cable must supply a moment about O of 72 kN·m. Determine T .

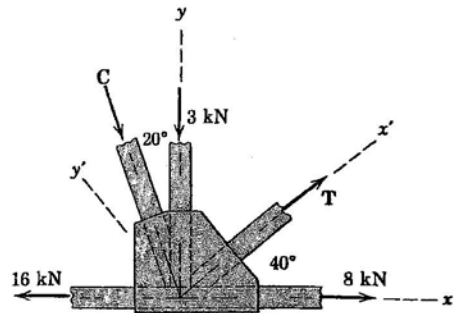
Ans. $T = 8.65$ kN



Problem 2/34

Sample Problem 3/1

Determine the magnitudes of the forces C and T which, along with the other three forces shown, act on the members of the bridge-truss joint.



Sample Problem 3/2

Determine the magnitude T of the tension in the supporting cable and the magnitude of the force on the pin at A for the jib crane shown. The beam AB is a standard 0.5-m I-beam with a mass of 95 kg per meter of length.

