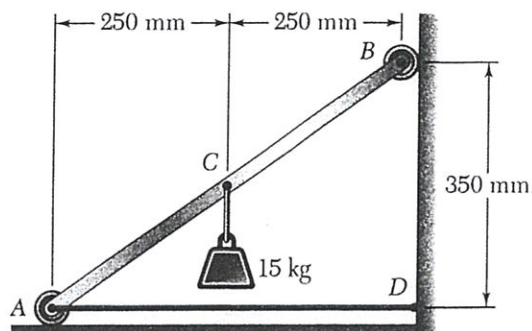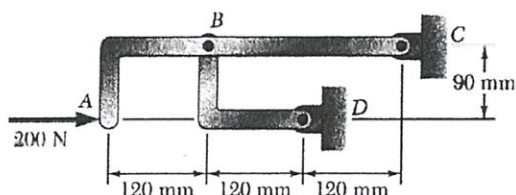●不可使用電子計算機

1. A light bar AB supports a 15-kg block at its midpoint C. Rollers at A and B rest against frictionless surfaces, and a horizontal cable AD is attached at A. Determine (a) the tension in cable AD, (10%) (b) the reactions at A and B. (15 %)

2. For the frame and loading shown, determine the force acting on member ABC
   (a) at B, (10 %) (b) at C. (15 %)

3. Block B starts from rest and moves with a constant acceleration of 10 m/s^2 .
   Determine the distance traveled by block A in 0.6 second.　(25 %)

4. The 75 Kg disk (radius r=0.2m) shown is pin-supported at its center O and a cord of
   negligible mass is wrapped around its periphery. The cord is attached to a 75 Kg
   block. If the block is released from rest, determine (a) the angular acceleration of
   the disk, (15 %) (b) the acceleration of the block (10 %).　The mass moment of

   inertia of the disk about O is $I_o = \frac{1}{2}mr^2$.