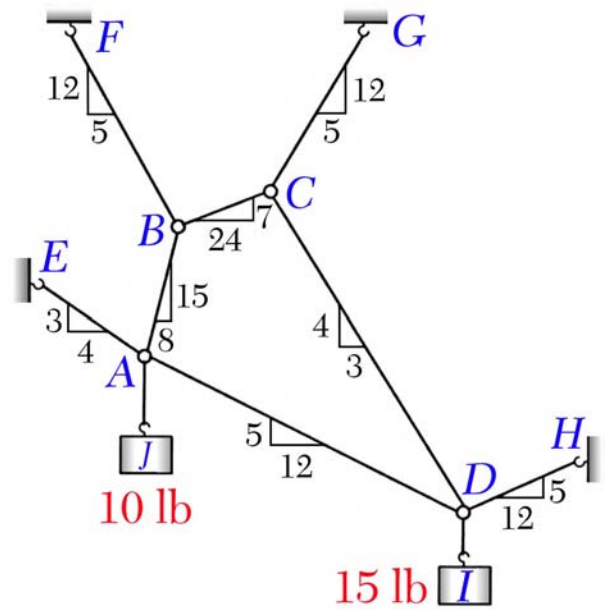


MEEG 2003 Quiz #3.m06.073

1. Describe the *free-body diagram* of a body. ②

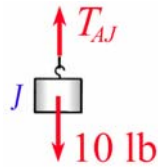
2. Two weights are hung as shown. (a) Determine the tensions T_{AJ} and T_{DI} in wires AJ and DI . (b) Draw the free-body diagrams for rings A , B , C , and D , separately, in terms of the eight unknown tensions: T_{AB} , T_{AD} , T_{AE} , T_{BC} , T_{BF} , T_{CD} , T_{CG} , and T_{DH} . ⑧



1. *Free-body diagram.* (See text.) ②

2.

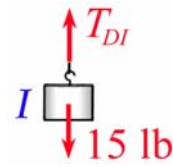
Body J :



$$+\uparrow \Sigma F_y = 0: T_{AJ} - 10 = 0$$

$$T_{AJ} = 10 \text{ lb} \quad \text{②}$$

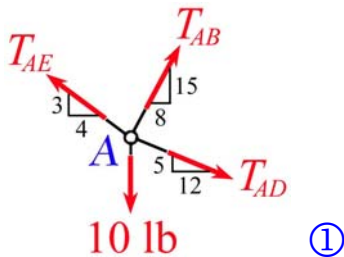
Body I :



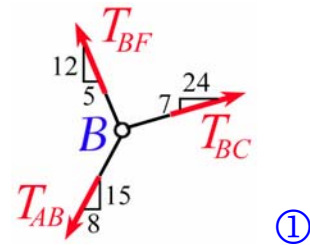
$$+\uparrow \Sigma F_y = 0: T_{DI} - 15 = 0$$

$$T_{DI} = 15 \text{ lb} \quad \text{②}$$

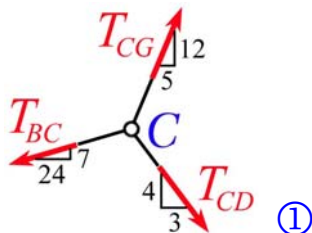
Ring A :



Ring B :



Ring C :



Ring D :

