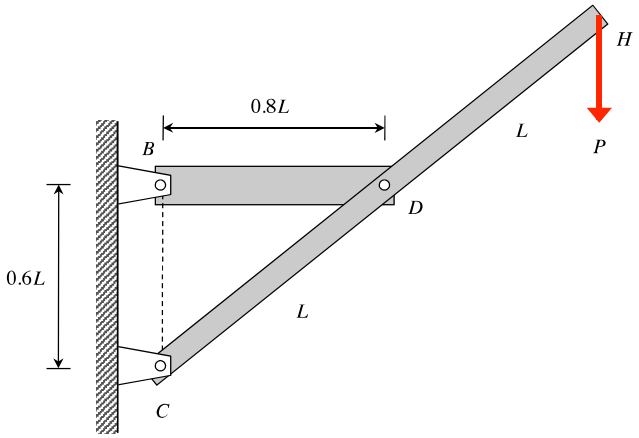
Homework H30.A

GIVEN: Consider the frame structure shown below that is supporting a load of P at end H of member CH. Member BD has a known cross-sectional area of A..

FIND: Determine the stress in member BD.

For this problem, use the following parameters: $P = 40$ kN, $L = 0.5$ m and $A = 500$ mm^2.



Homework H30.B

GIVEN: The L-shaped stand is pinned to ground at B. A person having a weight of W is positioned near end A of the stand.. The person is supporting herself and the stand through a cable-pulley system as shown. Consider the weight of the stand to be negligible compared to the weight of the person, and consider the pulleys to be ideal. The cable has a diameter of *d*.

FIND: Determine the stress in the cable.

For this problem, use the following parameters: W = 180 lb, h = 8 ft, a = 2 ft, c = 0.6 ft and e = 0.5 ft.

