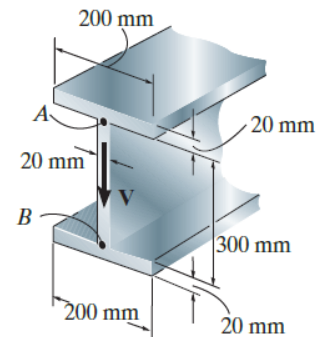


## Homework #1

All problems and images are from Mechanics of Materials, 10<sup>th</sup> Edition by R.C. Hibbeler

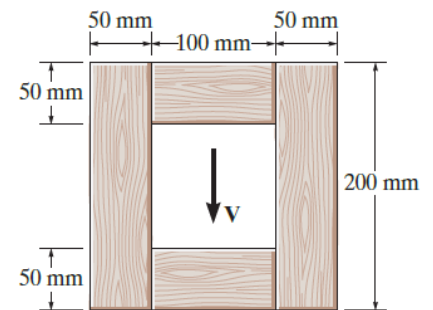
7-2.

If the wide-flange beam is subjected to a shear of  $V = 20$  kN, determine the maximum shear stress in the beam.



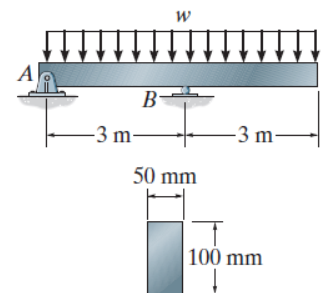
7-6.

The wood beam has an allowable shear stress of  $\tau_{\text{allow}} = 7$  MPa. Determine the maximum shear force  $V$  that can be applied to the cross section.



7-11.

The overhang beam is subjected to the uniform distributed load having an intensity of  $w = 50$  kN/m. Determine the maximum shear stress in the beam.



\*7-24.

Determine the shear stress at point  $B$  on the web of the cantilevered strut at section  $a-a$ .

