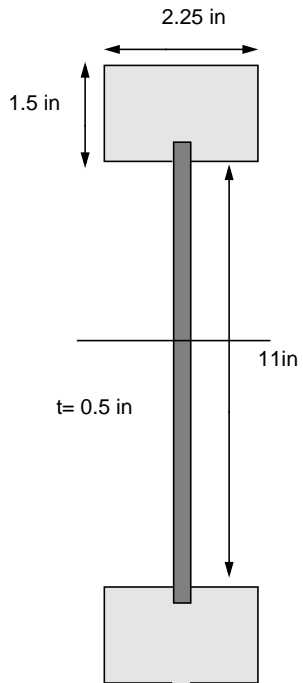


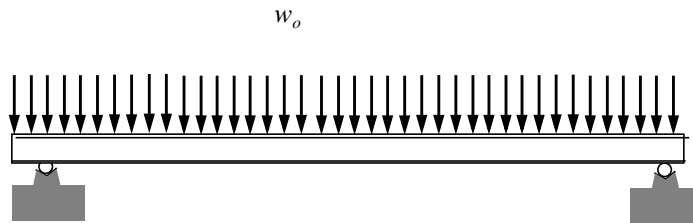
Class Exercise #18
1.050 Solid Mechanics Fall 2004



We show a beam, made of re-cycled wood, used as floor joists in contemporary housing construction.

Estimate the moment of Inertia, I :

What uniformly distributed load, w_o , can a simply-supported span of 20 ft sustain before generating a maximum normal stress due to bending of 1,000 psi. Neglect the weight of the beam.



Estimate the shear stress acting at the intersection of the flange and the web.