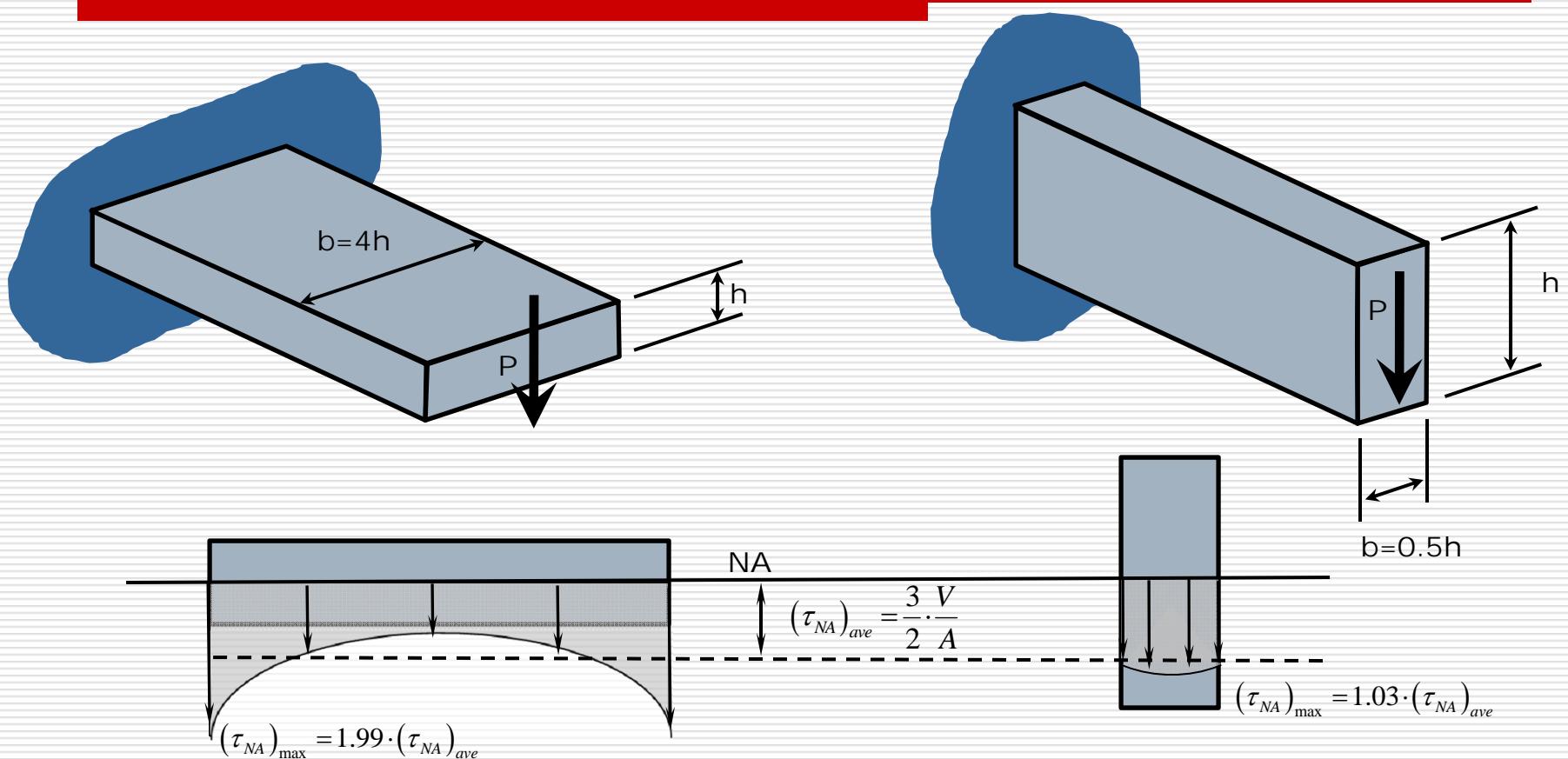


# Transverse Loading

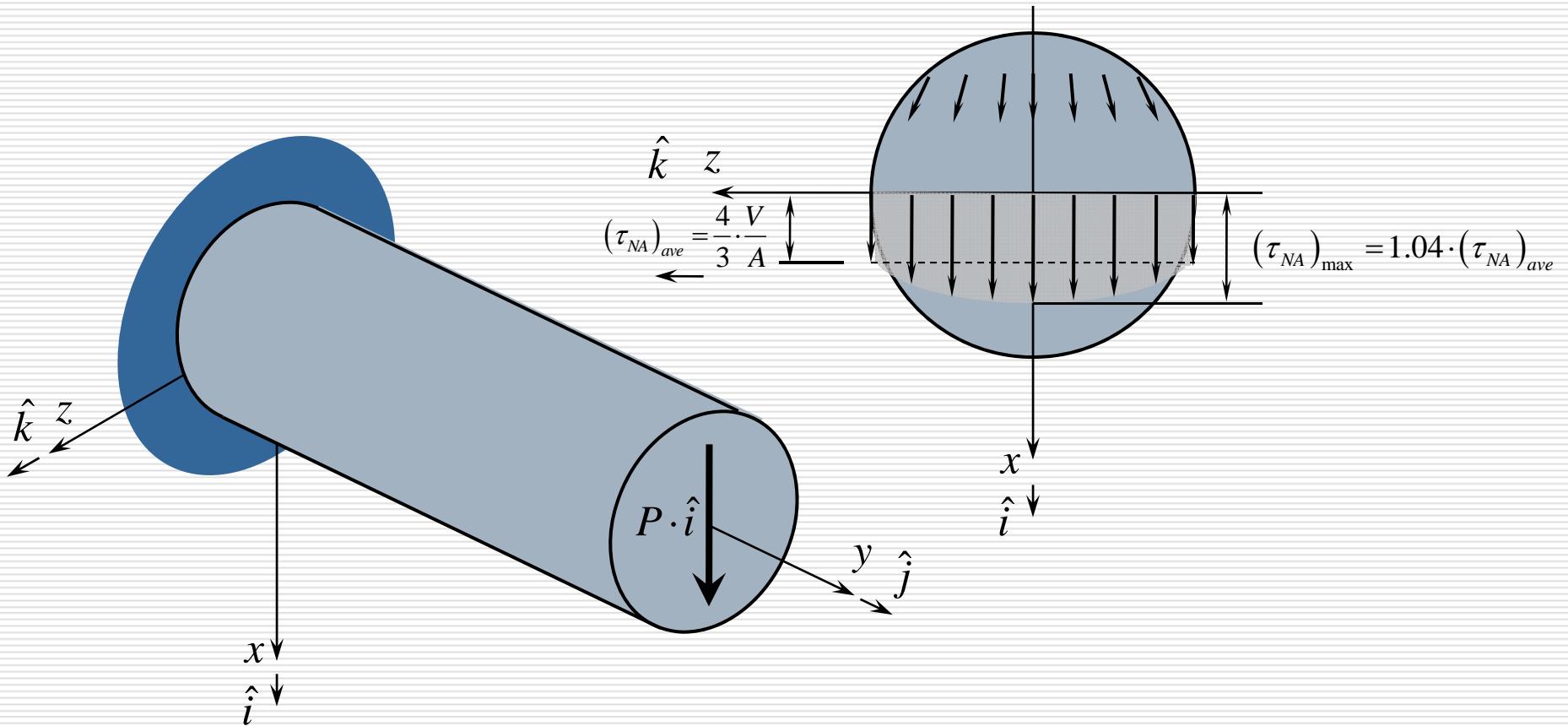
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- Shear Stress Calculation Error
- Shear Stress in Thin Walled Sections
- Shear Flow

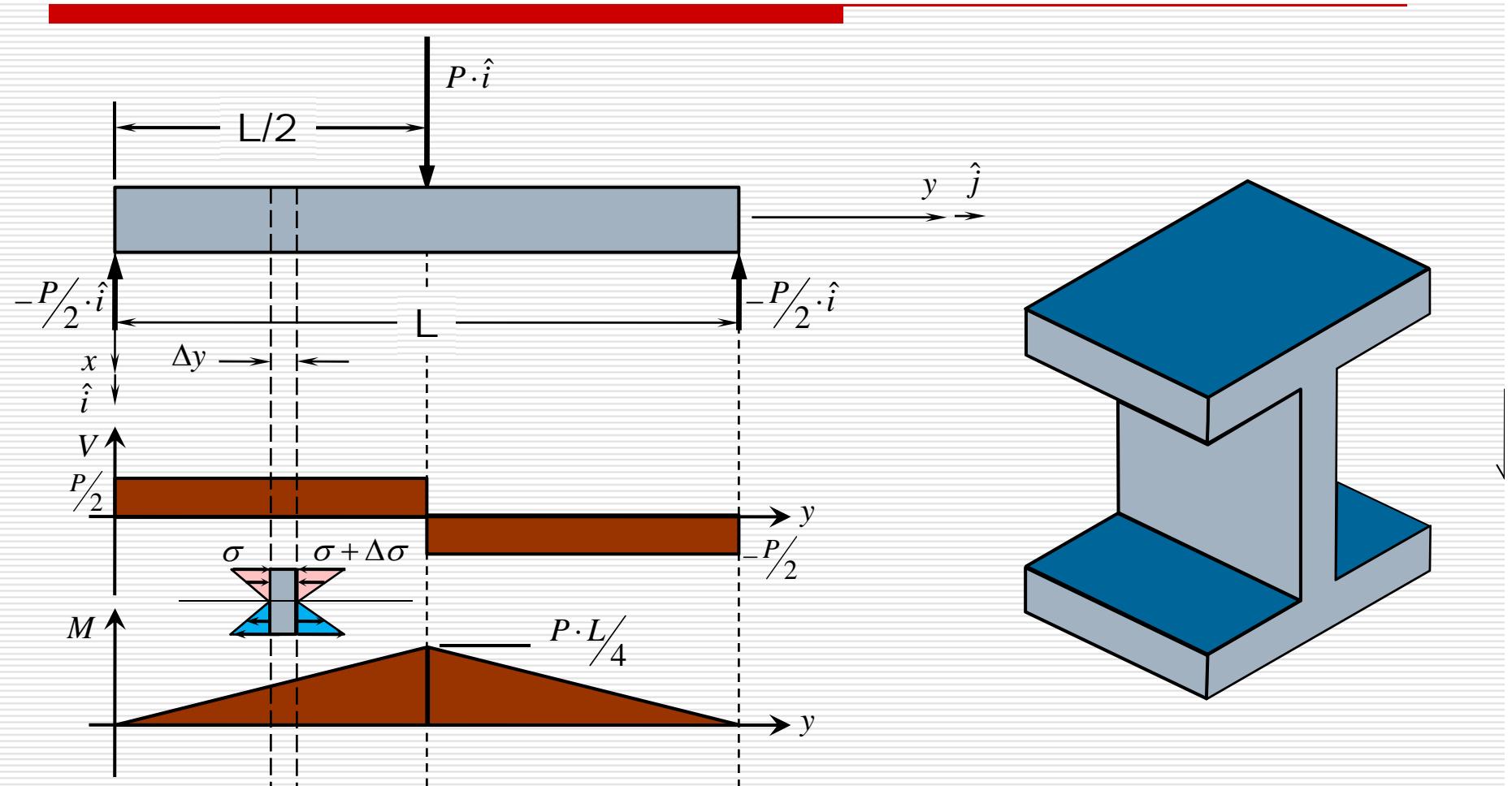
# Shear Stress Error



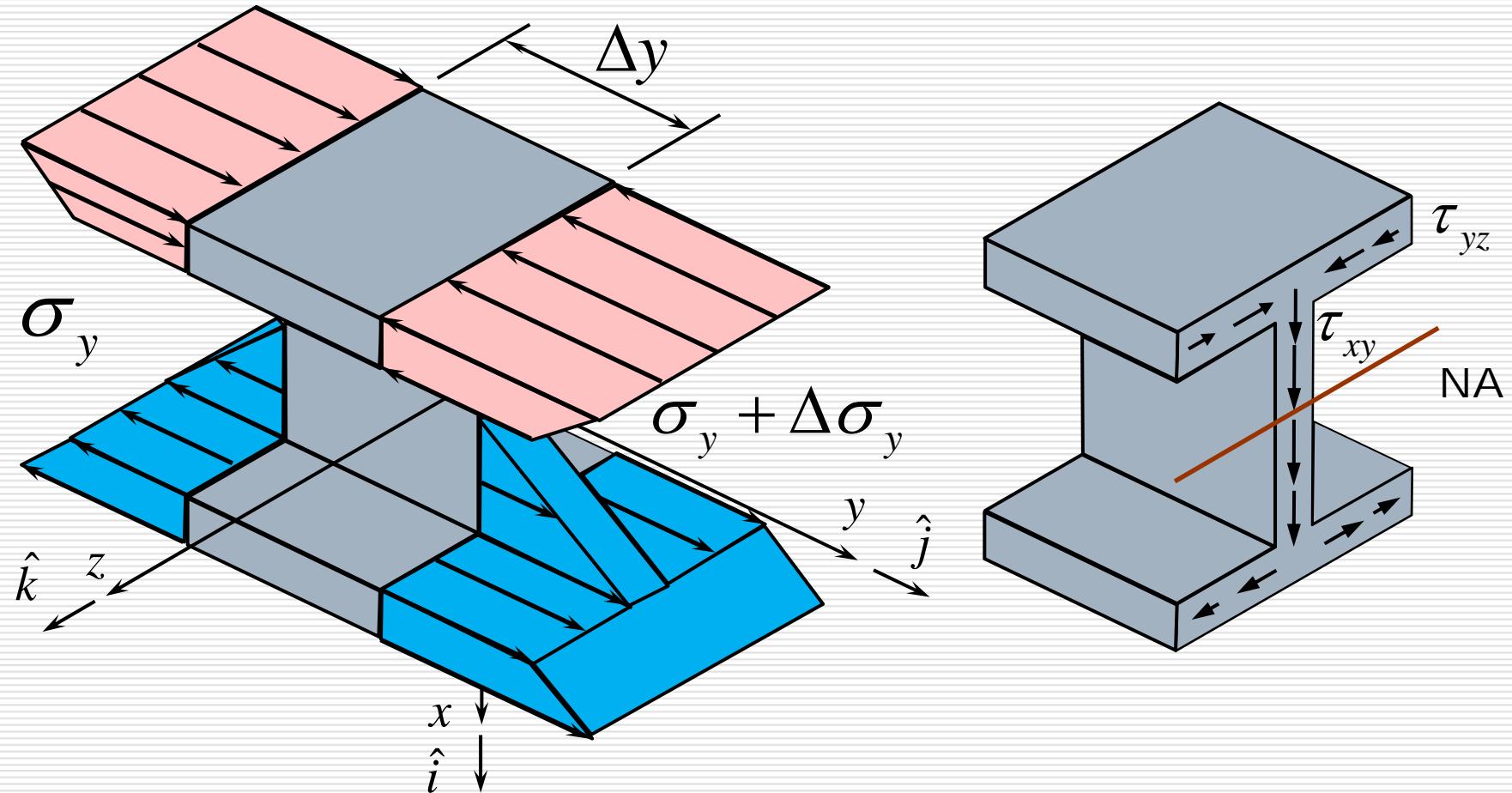
# Error in Circular Beams



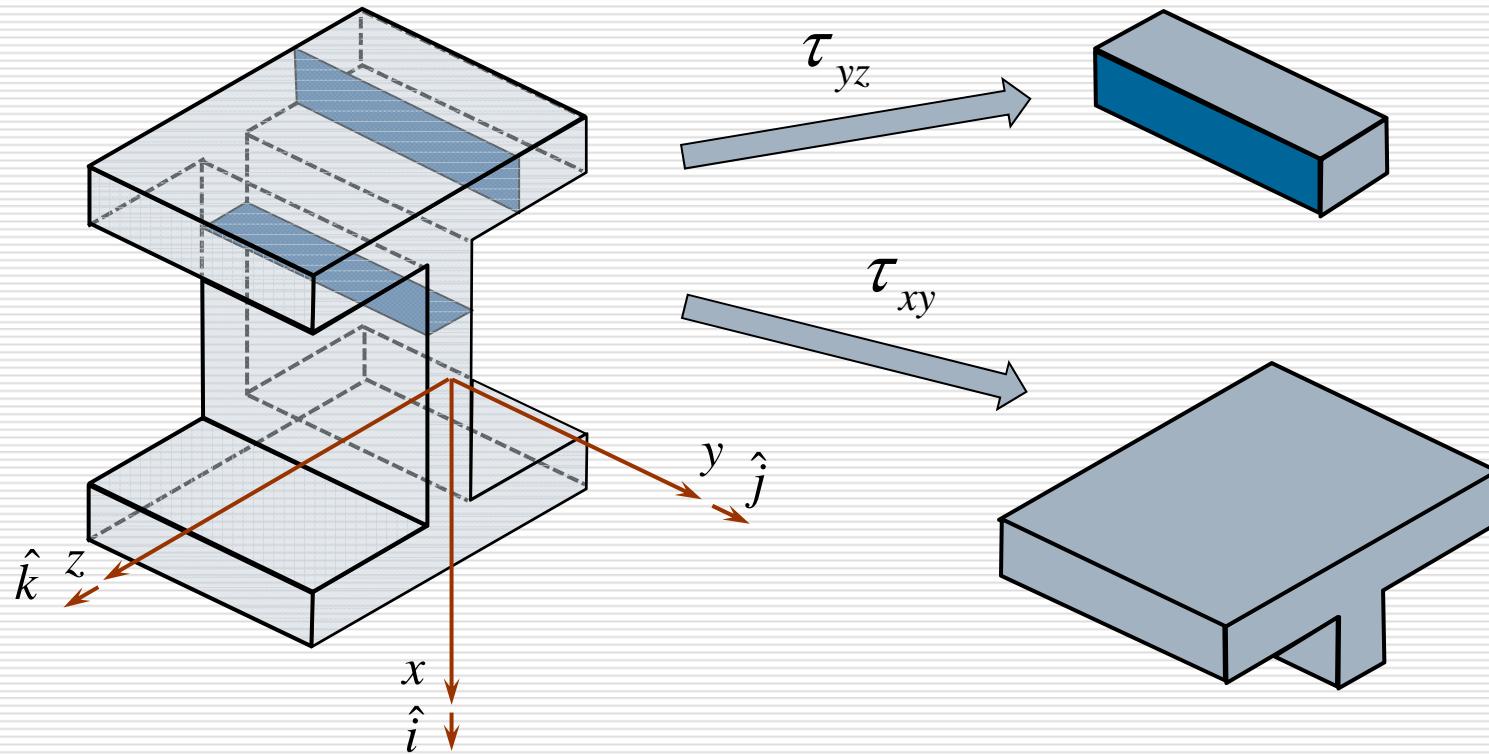
# Beam Loading



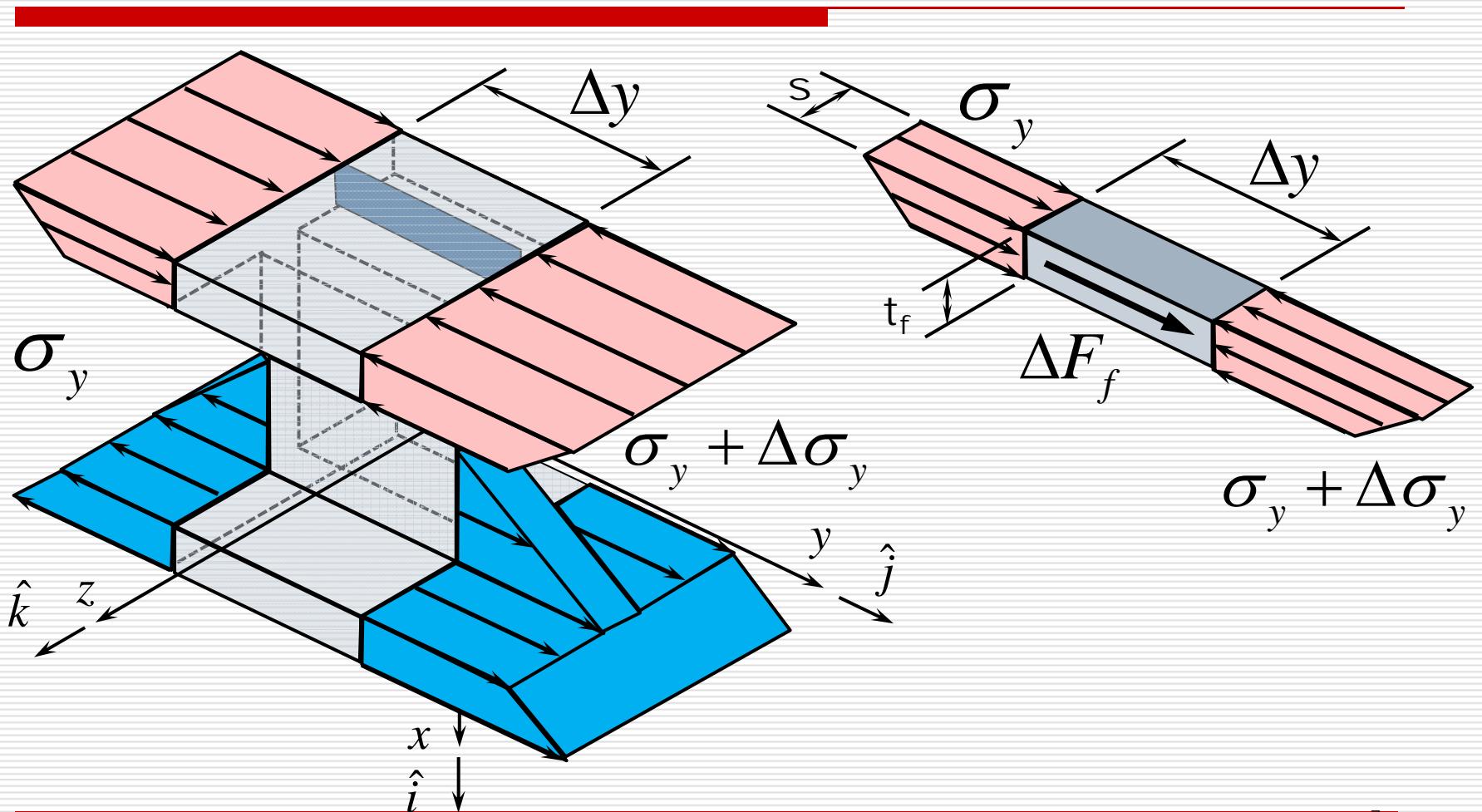
# Shear Stress in Thin Walled Sections



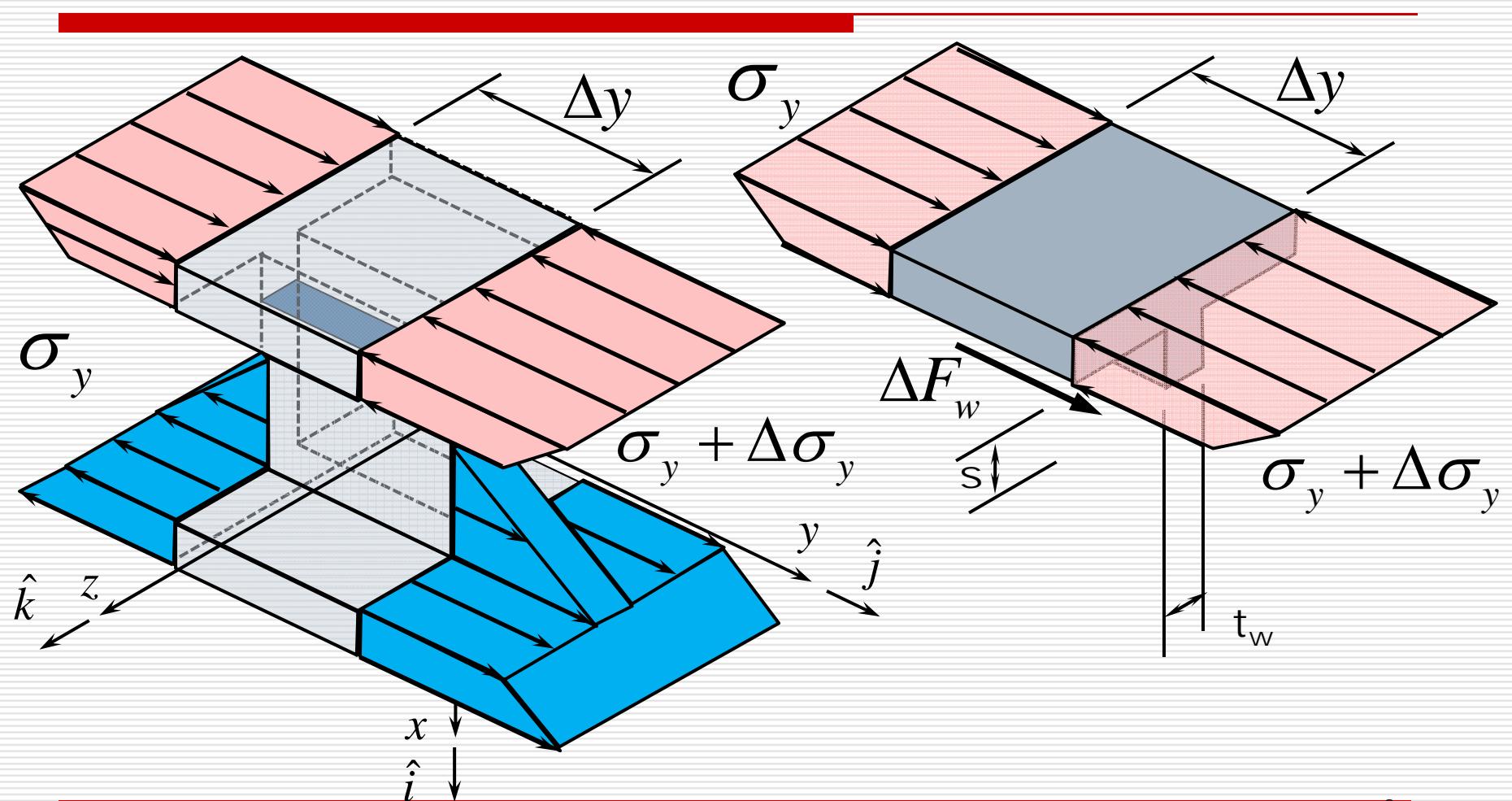
# Equilibrium of SubSections of the Beam are Considered



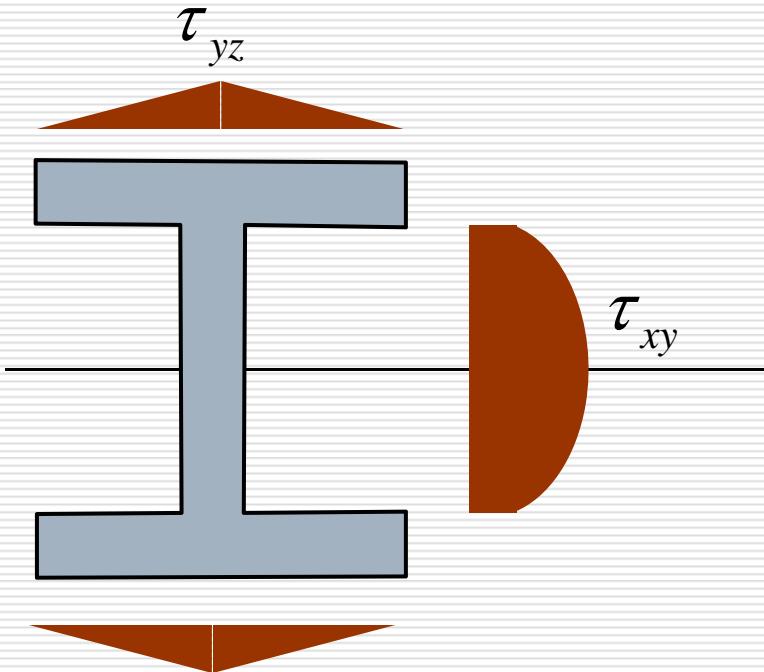
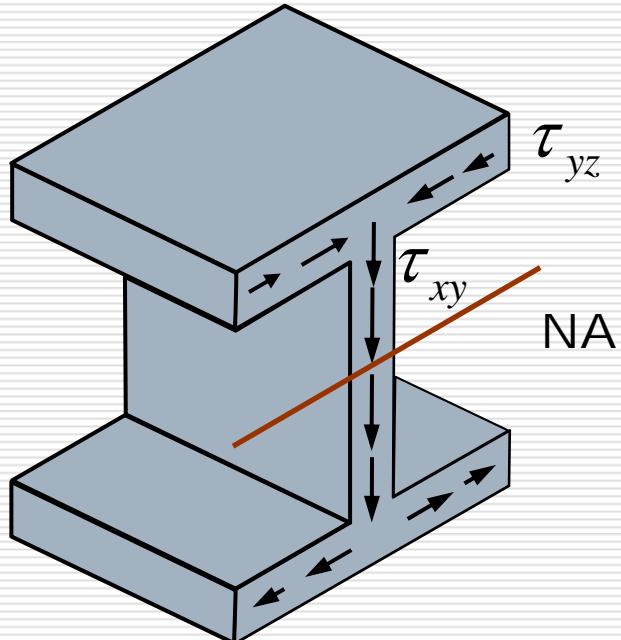
# Equilibrium in Flange



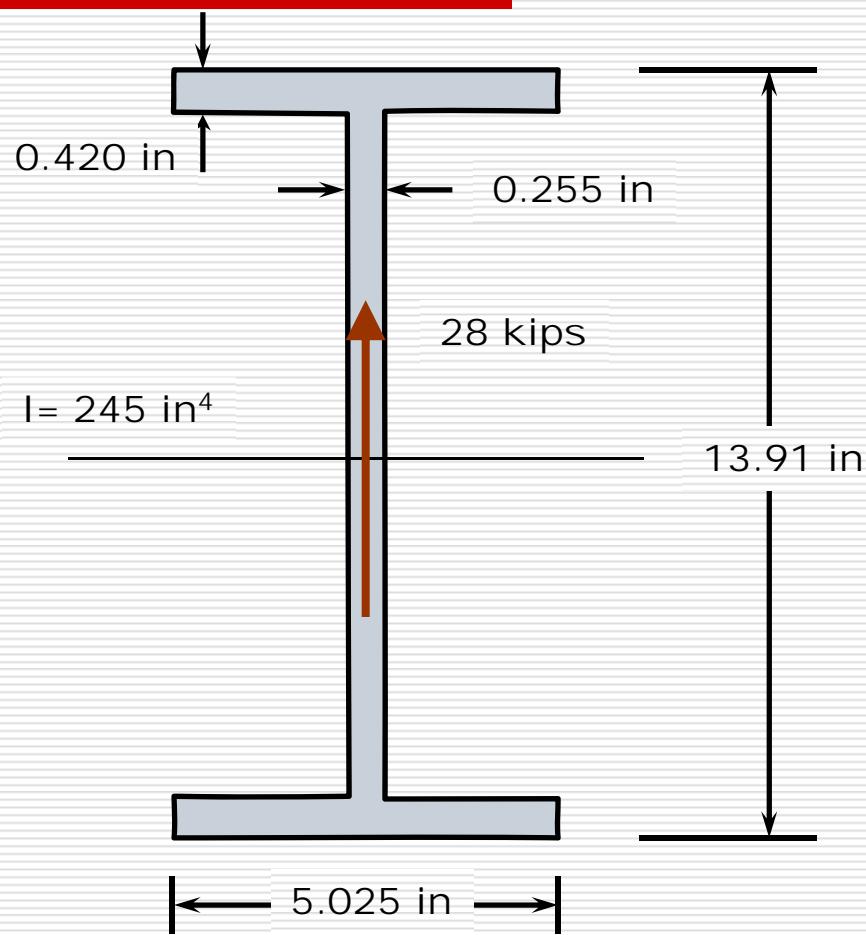
# Equilibrium in Web



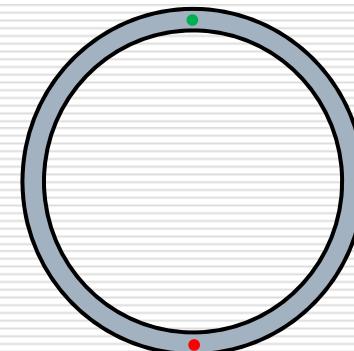
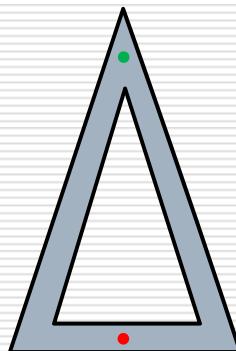
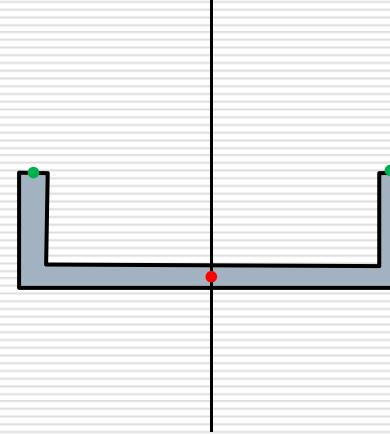
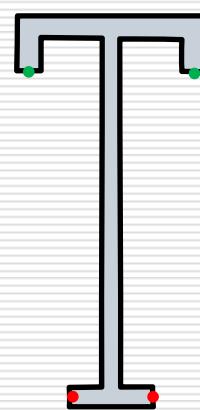
# Shear Stress Result



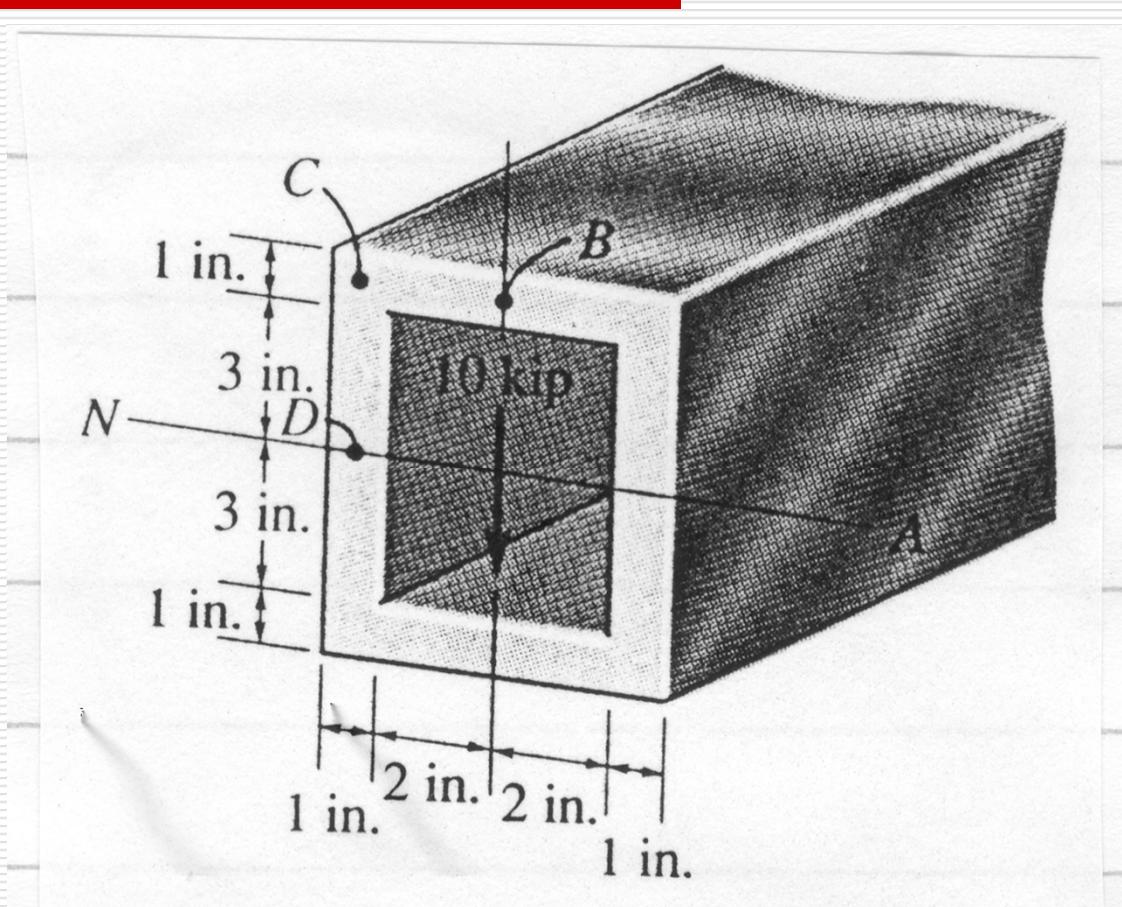
# Example



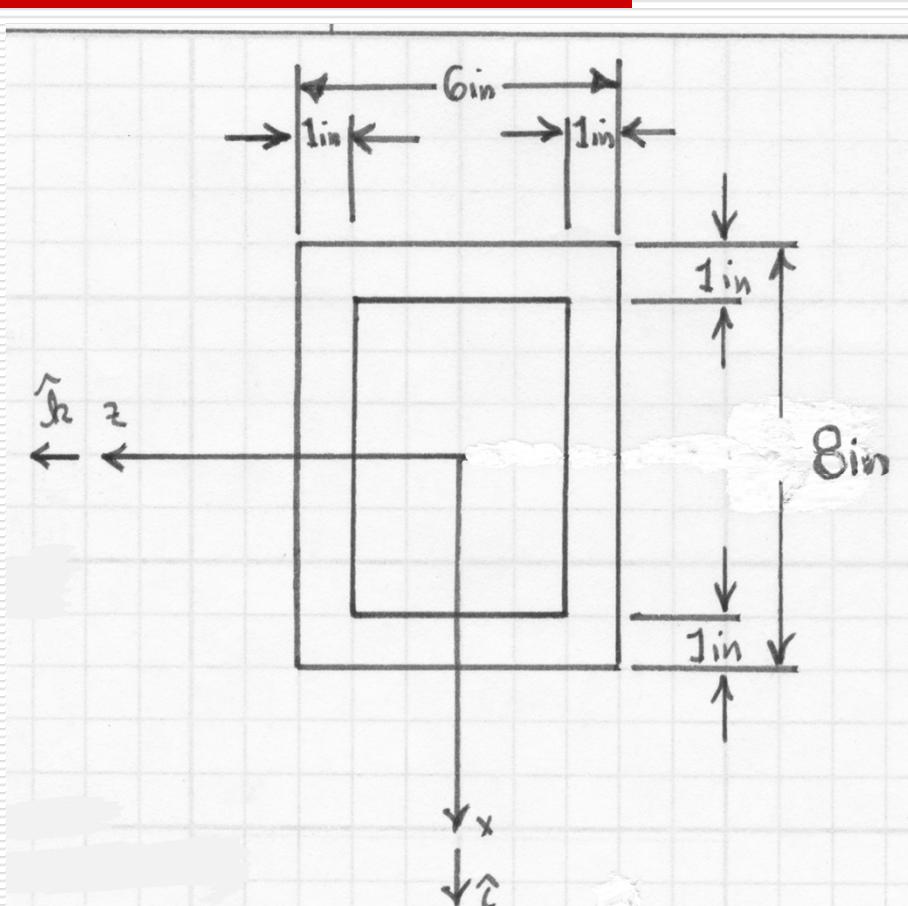
# Shear Stress Distributions



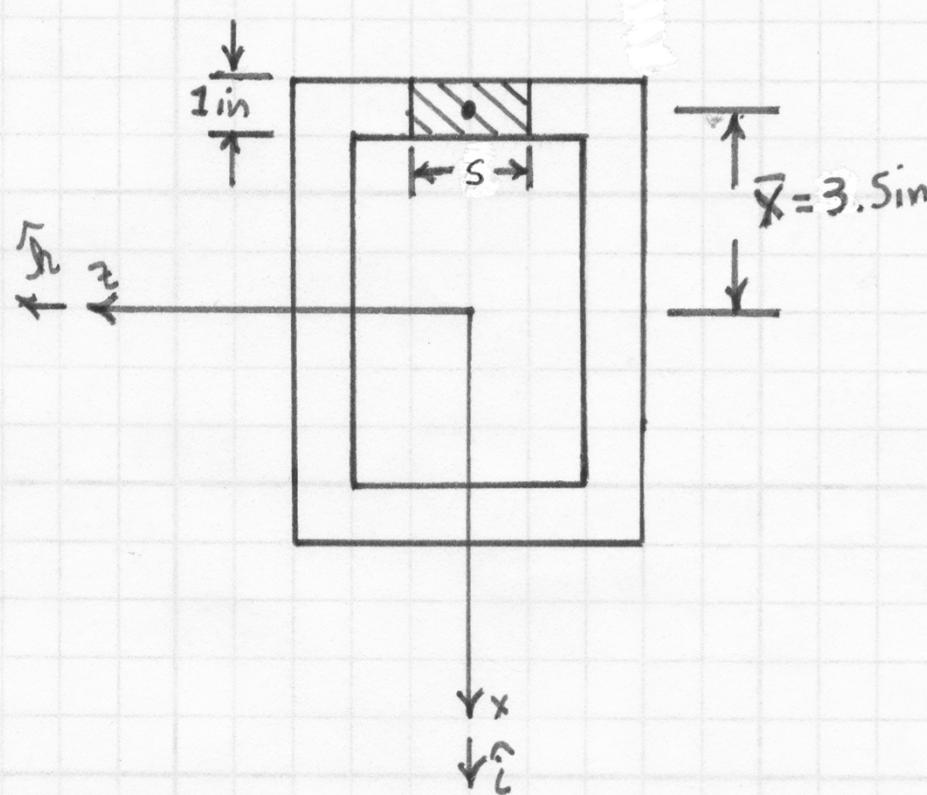
# Example



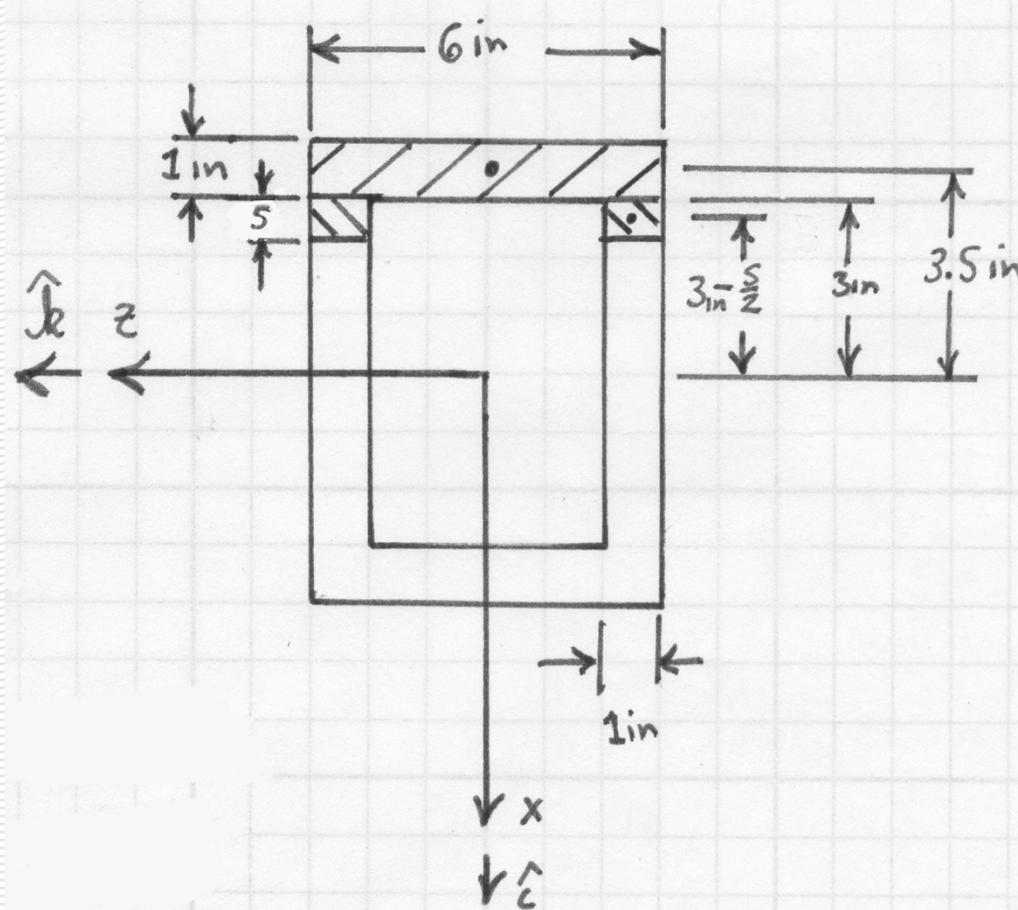
# Cross-Sectional Geometry



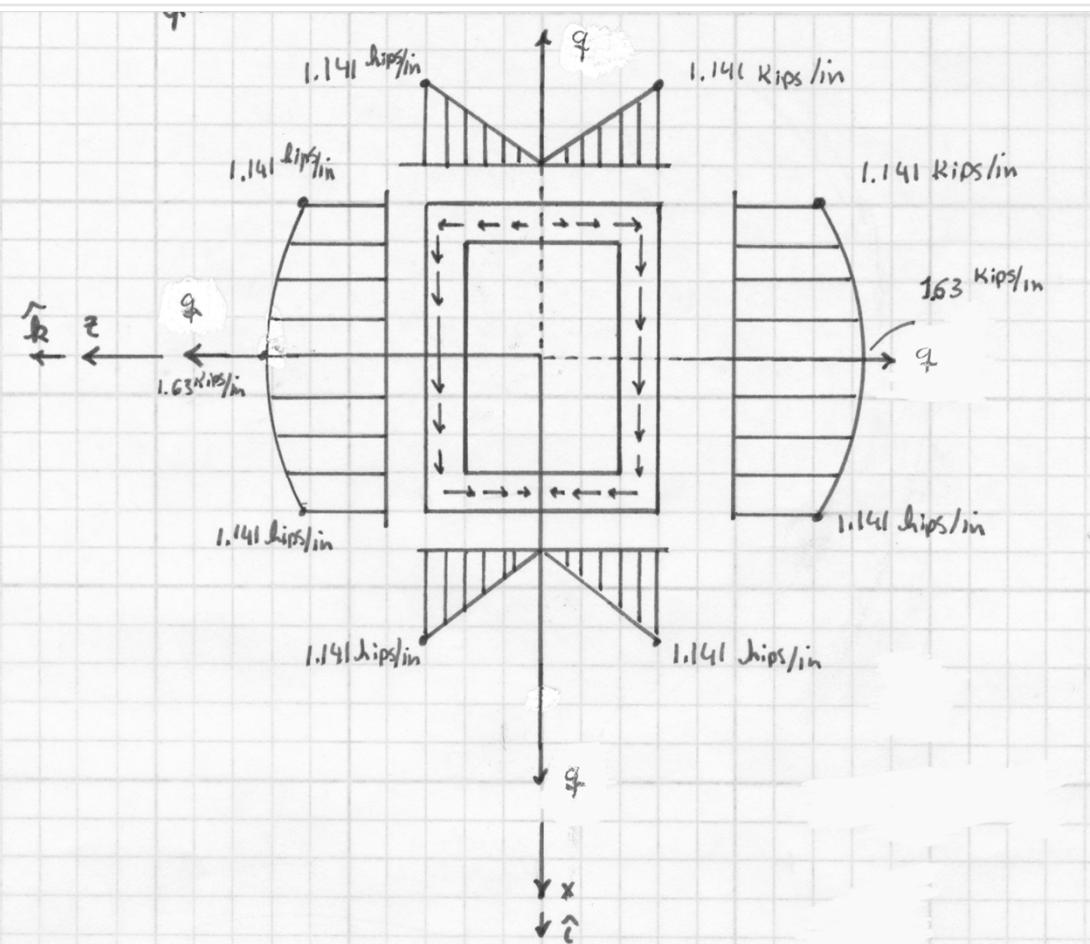
# Distribution in Top Section



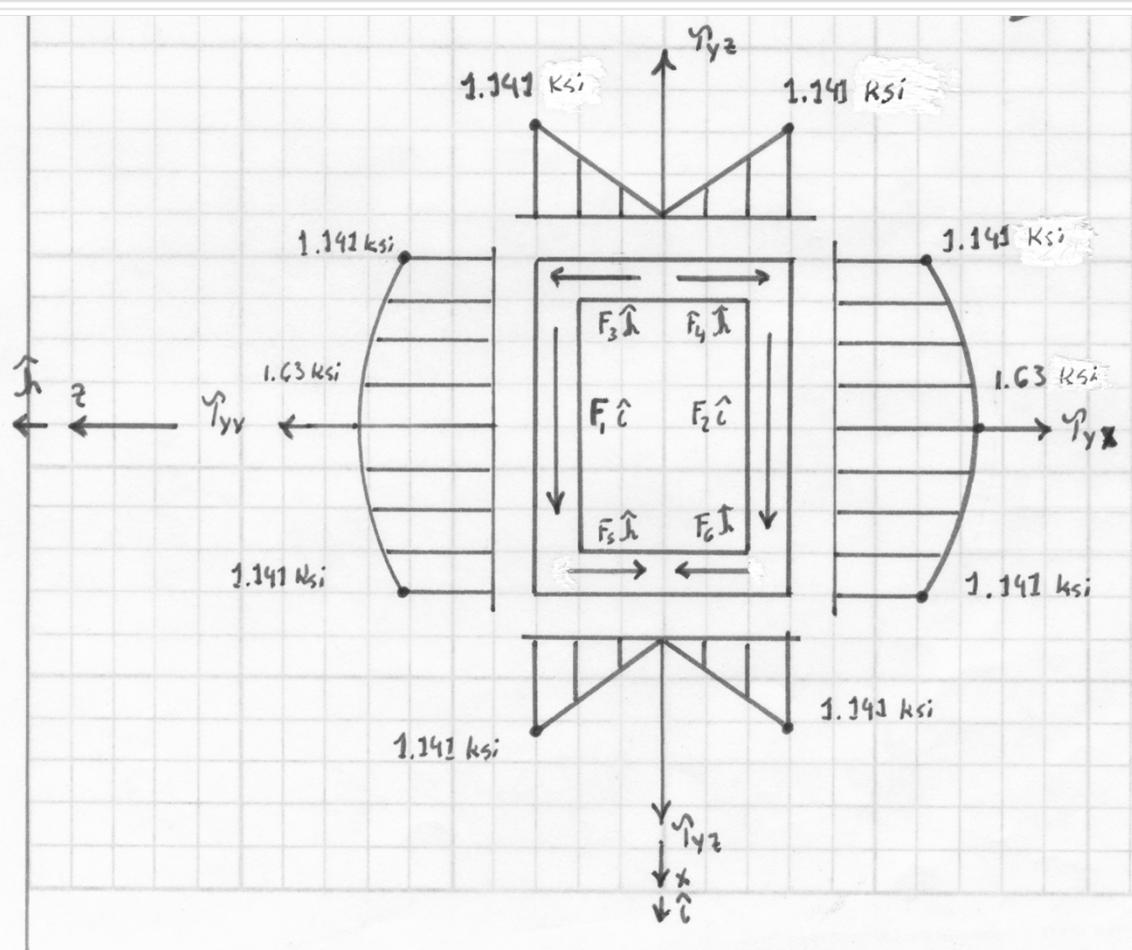
# Distribution in Side Sections



# Shear Flow

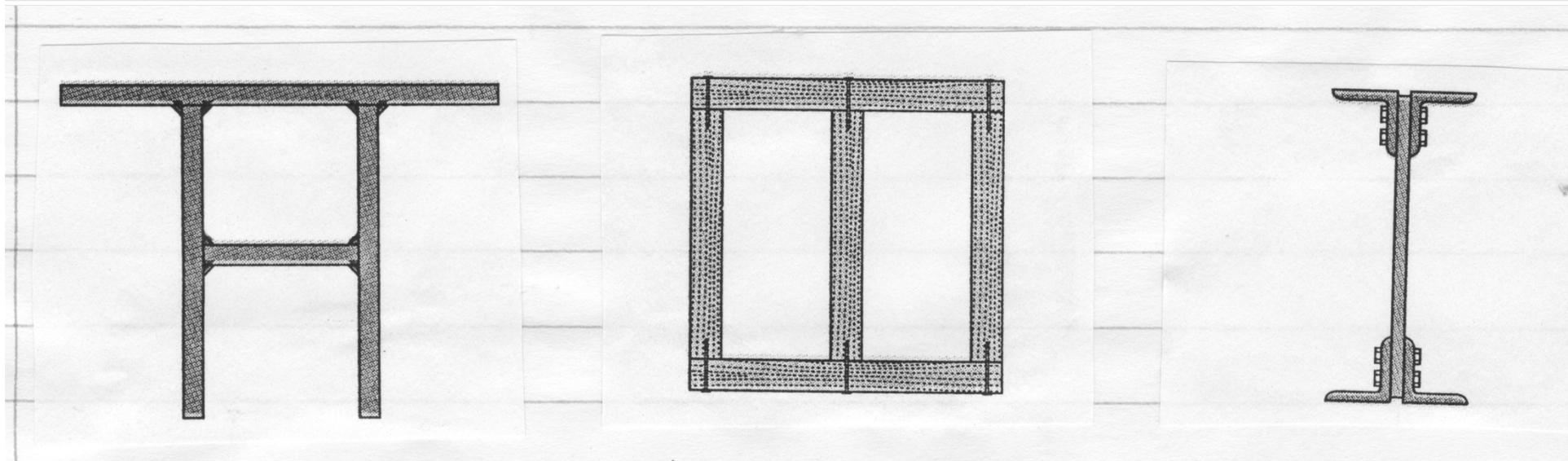


# Shear Stress

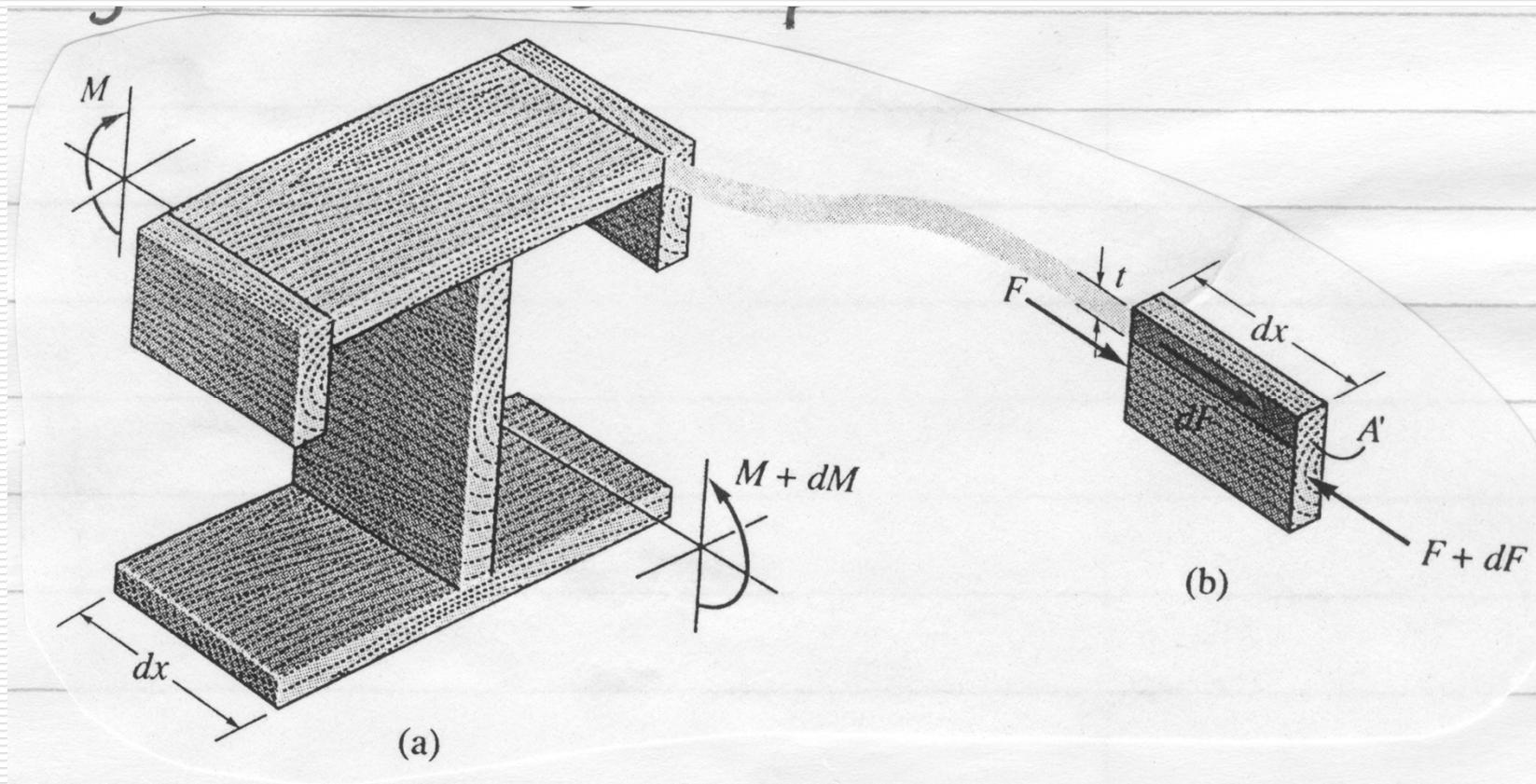


# Built Up Beams

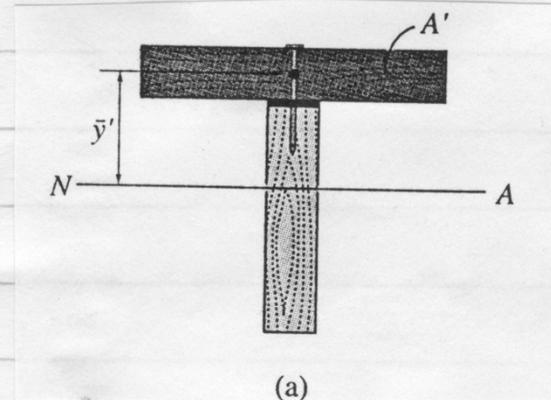
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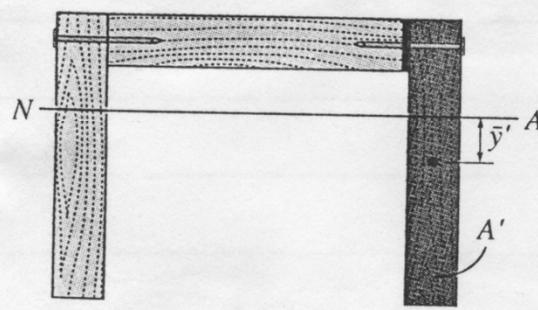
# Load at Intersection



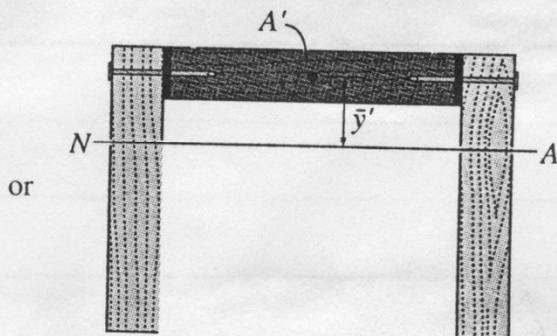
# Different Configurations



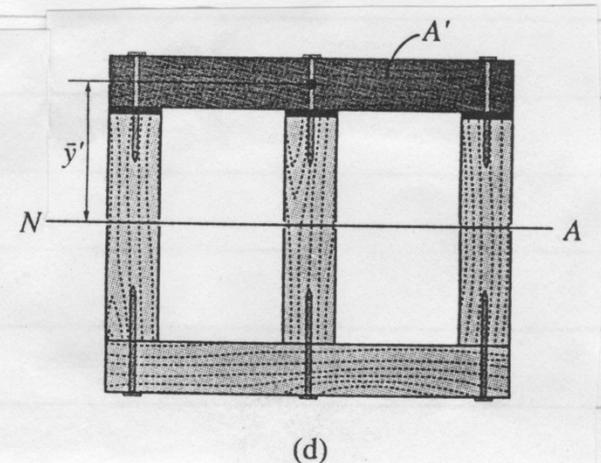
(a)



(b)



(c)



(d)

# Example

A box beam is to be constructed from four boards nailed together as shown. If each nail can support a shear force of 30lb, determine the maximum spacing  $s$  of nails at B and C so that the beam will support a vertical force of 80lbs.

