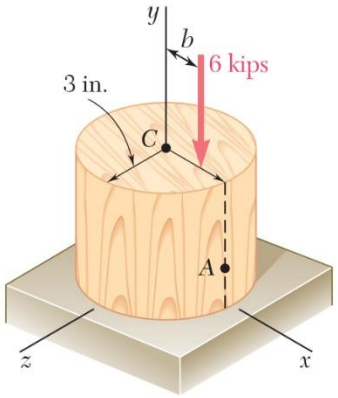
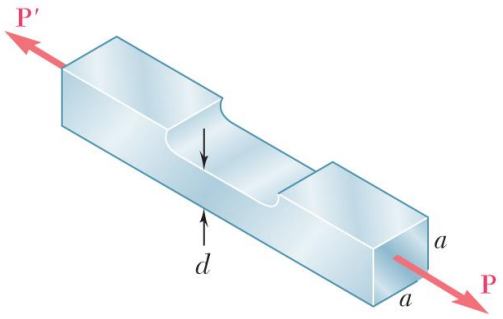
CVEN 305 Honors - Homework #7 Supplemental Problems

1) **For Problem 3,** a short wooden post supports a 6-kip axial load as shown. Plot the stress at point A when b equals 0 to 3 in. The input for the load, diameter of the wooden support, and b should be variable. You may check your program by solving the problem given by McGraw-Hill Connect.



2) **For Problem 5,** A milling operation was used to remove a portion of a solid bar of square cross section. A program is needed to determine the maximum stress in the bar for a given depth (d), overall dimension (a), and applied load (P). Develop a table of the stress in the beam when:
   1) d = 15 mm, P = 17 kN, a = 30 mm
   2) d = 20 mm, P = 25 kN, a = 45 mm
   3) d = 12 mm, P = 17 kN, a = 25 mm

   You may check your program by solving the problem given by McGraw-Hill Connect.



3) **For Problem 6,** The couple M is applied to a beam of the cross section shown in a plane forming an angle β with the vertical as shown. Plot the normal stresses at points A, B, and D as the angle β ranges from 0 to 180 degrees. You may check your program by solving the problem given by McGraw-Hill Connect.