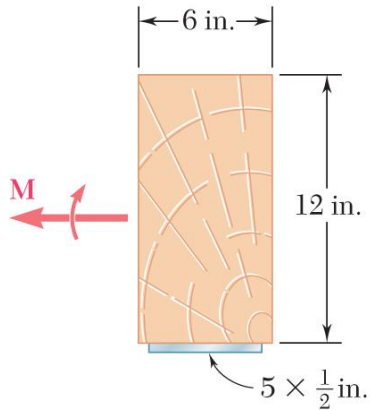


CVEN 305 Honors - Homework #6 Supplemental Problems

- 1) **For Problem 7**, A steel strap is fastened to a wood beam as shown. Develop a program that determines the maximum stress in the wood beam for a moment applied about the centroid's x axis. Your inputs should include the dimensions for the wood and steel members, modulus of elasticity for both members, and the applied moment. You may check your program by solving the problem given by McGraw-Hill Connect.



- 2) **Additional Problem**, Three steel plates are welded together to form the beam shown, where $t_f = 0.5$ in., $t_w = 0.375$ in., $d = 12$ in., and $b_f = 7.5$ in. The steel is assumed to be perfectly elastic with $E = 29,000$ ksi. Develop a table and graph of the stress in the beam for a depth, y , equal to $-d/2$ to $d/2$, where y is the distance from the centroid as defined in class, when the applied moment is:
- 1) 145 k-ft
 - 2) 40 k-ft
 - 3) 112 k-ft
 - 4) 200 k-ft
 - 5) 75 k-ft

List all of the results on a single table and graph.

