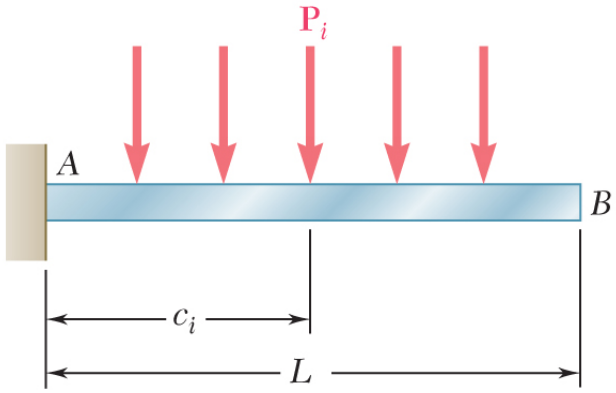
CVEN 305 Honors - Homework #12 Supplemental Problems

1) **For Problem 1,** Several concentrated loads can be applied to the cantilever beam AB. Write a computer program to calculate the slope and deflection of beam AB from x = 0 to x = L, using given increments Δx.

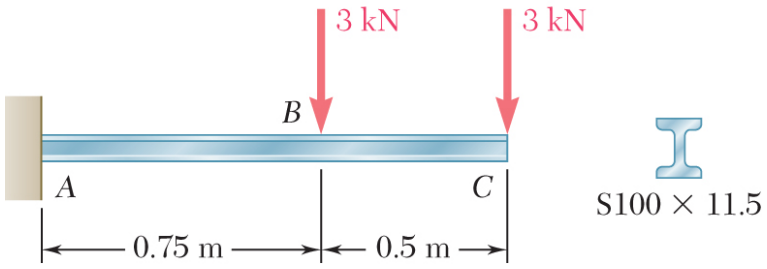


Apply this program with increments Δx = 50 mm to the following problems:

a) For the cantilever beam and loading shown, determine the slope and deflection at the end C. Use E = 200 GPa.

b) For the cantilever beam and loading shown, determine the slope and deflection at point B. Use E = 200 GPa.

c) You may check your program by solving the problems given by McGraw-Hill Connect.



2) **For Problem 9,** The 22-ft beam AB consists of a W21X62 rolled-steel shape and supports a 3.5-kip/ft distributed load as shown. Write a computer program and use it to calculate for values of a from 0 to 20 ft, using 1-ft increments, (a) the slope and deflection at D, (b) the location and magnitude of the maximum deflection. Use E = 29 X 10^6 psi. You may check your program by solving the problems given by McGraw-Hill Connect. (Note: you should leave E, L, I, etc. as input variables).