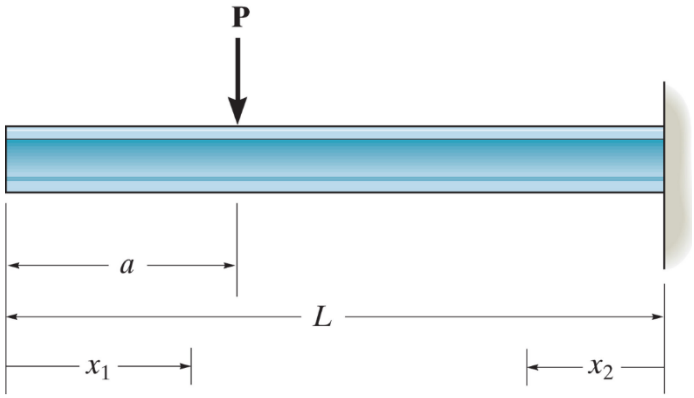
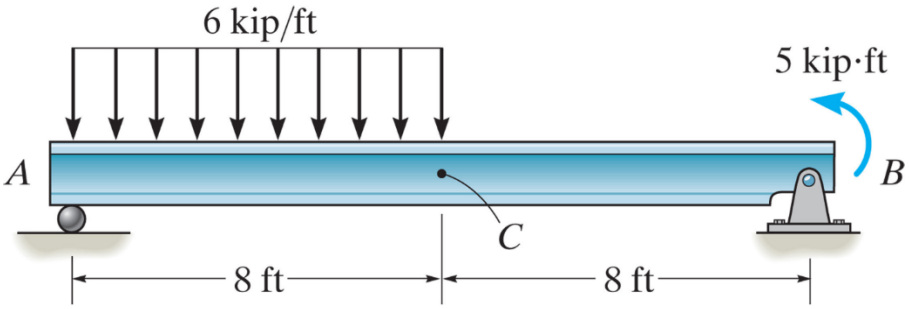
Problem 12-4

Determine the equations of the elastic curve using the $x_1$ and $x_2$ coordinates. EI is constant.



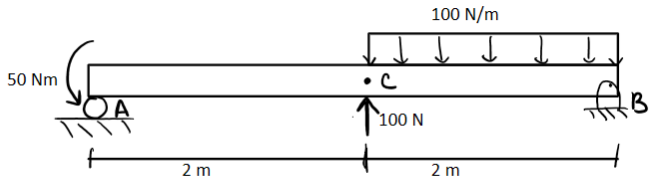
Problem 12-89

The W8x24 simply supported beam is made of A-36 steel and is subjected to the loading shown. Determine the deflection at C and the slopes of A and B.



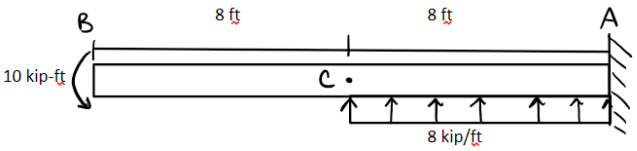
Example 2

The C180x22 beam is made of 2014-T6 aluminum and subjected to the loadings shown. Determine the deflection at C and the slope of A and B.



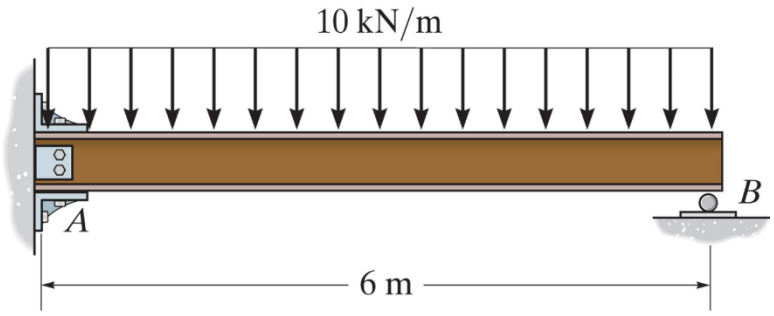
Example 3

The W12x26 beam is made of Gray ASTM 20 cast iron and is subjected to the loadings shown. Determine the deflection and slope at the end of the beam (point B).



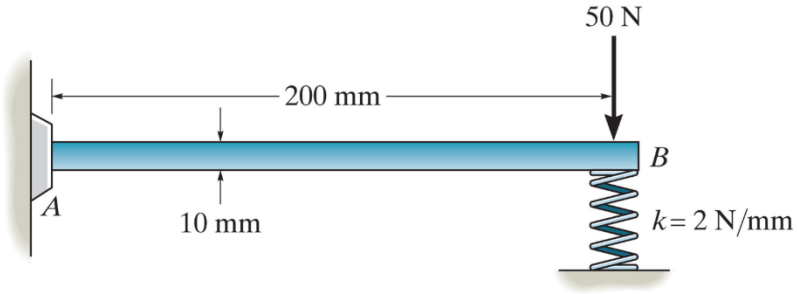
Example 4

Determine the reactions at the fixed support A and the roller B. E = 200 GPa, I = 65E-6 $m^4$



Problem 12-121

Determine the deflection at the end B of the clamped A-36 steel strip. The spring has a stiffness of k = 2 N/mm. The strip is 5 mm wide and 10 mm high. Also, draw the shear and moment diagrams for the strip.



Chapter 12 Lecture Problems

Problem 12-123

Determine the reactions at support C.
EI is the same for both beams.