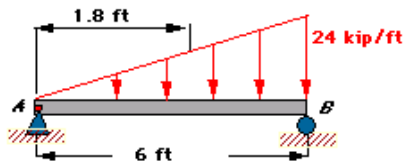


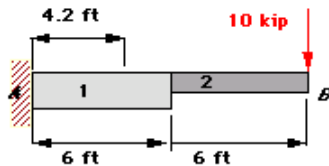
1)



Simply supported beam  $AB$  is subjected to a linearly varying load as shown. Determine the slope and deflection of the beam at 1.8 ft to the right of support  $A$ , knowing that for this beam

$$EI = 10,600 \times 10^6 \text{ lb-in.}^2$$

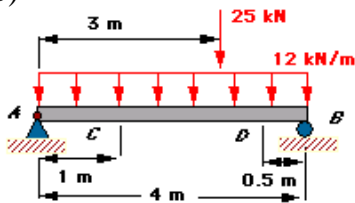
2)



Cantilevered beam  $AB$  is 12 ft long and consists of two sections. It is subjected to a 10-kip end load. Determine the deflection of the beam at 4.2 ft to the right of support  $A$  and at end  $B$  knowing that

$$EI_1 = 24,000 \times 10^6 \text{ lb-in.}^2 \quad EI_2 = 9,600 \times 10^6 \text{ lb-in.}^2$$

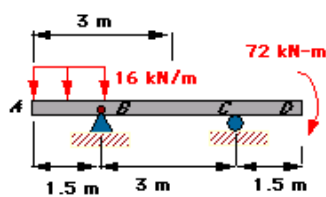
3)



Beam  $AB$  is subjected to a uniformly distributed 12-kN/m load and a concentrated 25-kN force. Determine the deflection of the beam at points  $C$  and  $D$ , knowing that

$$EI = 55 \times 10^6 \text{ N-m}^2$$

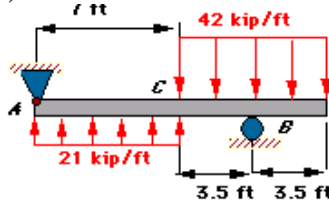
4)



Beam  $ABCD$  is subjected to a uniformly distributed 16-kN/m load and a concentrated 72 kN-m moment. Determine the deflection of the beam midway between supports  $B$  and  $C$ , knowing that

$$EI = 60 \times 10^6 \text{ N-m}^2$$

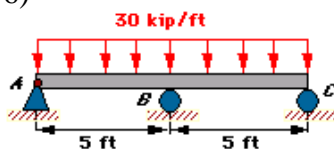
5)



The simply supported beam shown is subjected to the two uniform loads indicated. Determine the deflection of the beam at point  $C$  (7 ft to the right of  $A$ ) knowing that for this beam

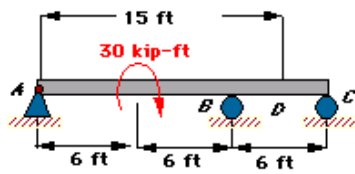
$$EI = 12,600 \times 10^6 \text{ lb-in.}^2$$

6)



Beam  $ABC$  is subjected to a uniformly distributed 30-kip/ft load. Determine the reactions at supports  $A$ ,  $B$ , and  $C$ .

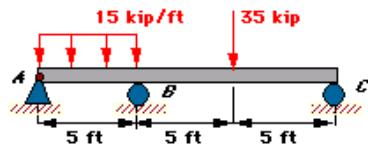
7)



Beam  $ABC$  is subjected to the 30 kip-ft moment shown. Determine deflection at point  $D$  knowing that

$$EI = 560 \times 10^6 \text{ lb-in.}^2$$

8)

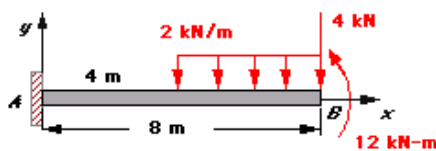


Simply supported beam  $ABC$  is subjected to a uniformly distributed 15-kip/ft load and a concentrated 35-kip force as shown. Determine the reactions at  $A$ ,  $B$ , and  $C$ .

$$EI = 9,500 \times 10^6 \text{ lb-in.}^2$$

Superposition

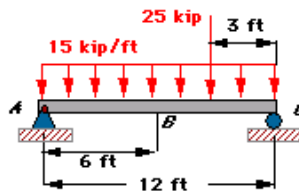
9)



Cantilevered beam  $AB$  supports the loads shown. Determine the deflection at point  $B$  knowing that for this beam

$$EI = 130 \times 10^6 \text{ N-m}^2$$

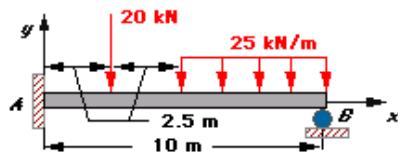
10)



For the beam loaded and supported as shown, determine the deflection of point  $B$  knowing that

$$EI = 1150 \times 10^6 \text{ lb-in.}^2$$

11)



Propped cantilevered beam  $AB$  supports the loads shown. Determine the reaction at point  $B$  knowing that for this beam

$$EI = 60 \times 10^6 \text{ N-m}^2$$

12)

