1. The simply supported beam shown in FIGURE 1 is 10 m long with $E = 200 \times 10^9$ Pa and $I = 150 \times 10^{-6}$ m^4.
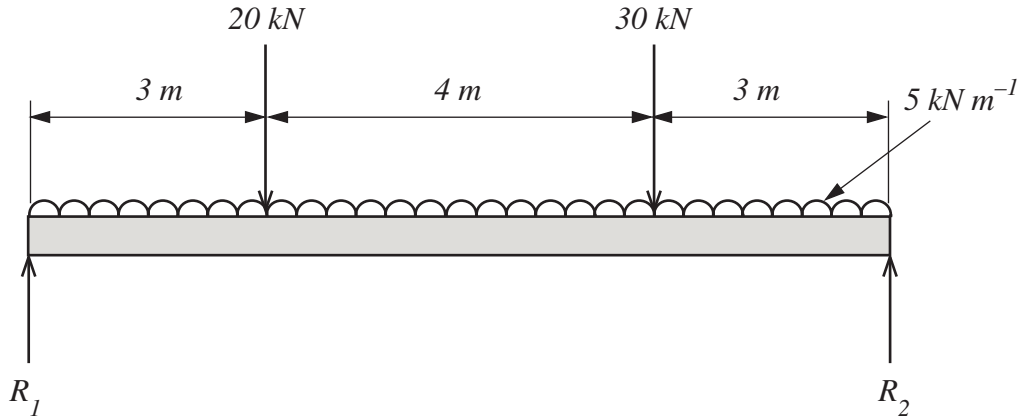

FIG. 1

For the beam in FIGURE 1:

(a) (i) Determine the position and magnitude of the maximum bending moment.

(ii) Plot a graph of the deflection along the length of the beam (calculate the deflection at 1 m intervals).