ANSYS - Plane Frame

Plane Frame

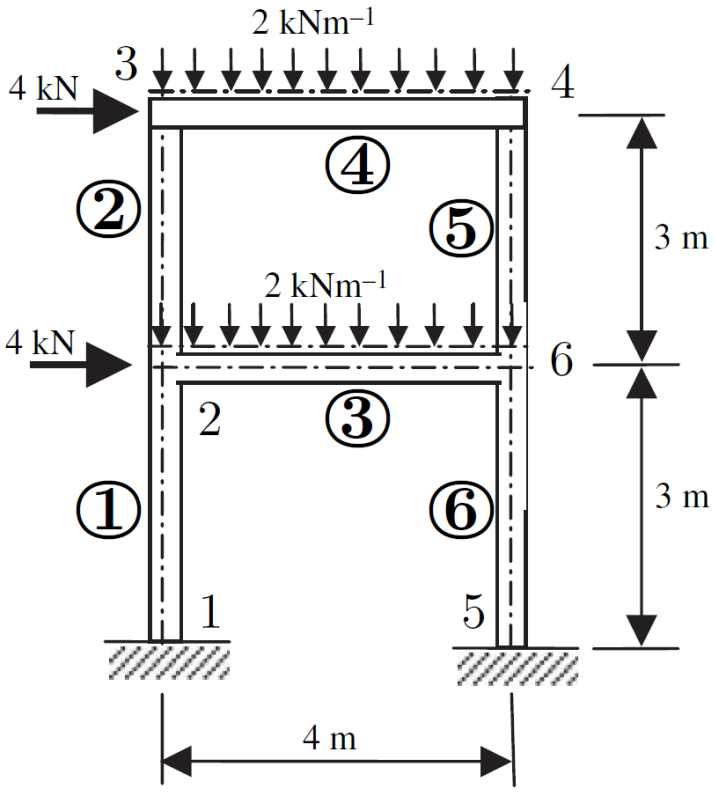
Problem Specification

This is **not** a step-by-step ANSYS tutorial. Rather, it states the problem to be solved and provides some tips and guidance on solving it using ANSYS Mechanical. Go through the truss and beam tutorials before attempting this problem.

Consider the plane frame structure in the figure below. All bars have cross-section properties EI = 2.5e7 N-m2 and EA = 2.5e9 N.

Find:

- The deformed shape of the frame
- The location in the frame that undergoes the maximum total deflection
- The maximum shear force and axial force in each span
- The bending moment at each span endpoint



Solution Tips

Mathematical Model

Numerical Solution Strategy

Go to all ANSYS Learning Modules