



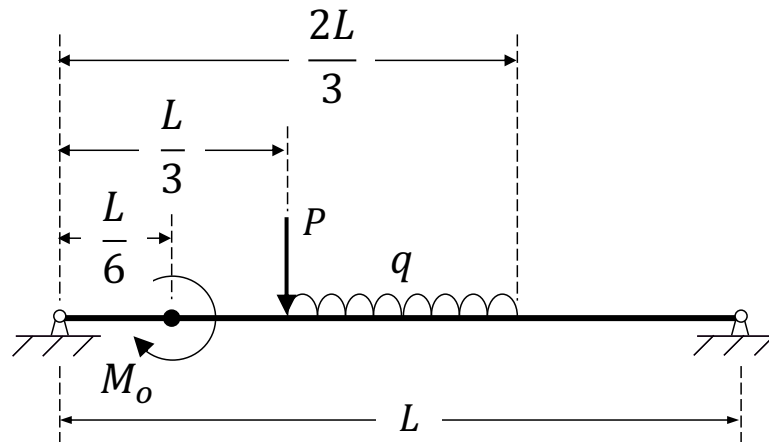
Deflection of Beams

Worked Example 2

Worked Example 2

Simply Supported Beam with Point Load, Discontinuous Uniformly Distributed Load & Point Bending Moment Problem

The beam shown below is the worked example from section 6 of the notes, and is a simply supported beam subjected to a point load, a point bending moment and a discontinuous uniformly distributed load.



$$L = 0.75 \text{ m}$$

$$M_o = 3 \text{ kNm}$$

$$P = 2 \text{ kN}$$

$$q = 4 \text{ kN/m}$$

$$E = 200 \text{ GPa}$$

$$D = 50 \text{ mm}$$

Problem

Use Macaulay's method to determine the slope and deflection of the beam at its centre position.

See video recording for solution