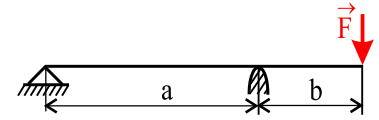

Problem 618

Determine the deflection and slope at the free end of the beam of the circular cross section with the diameter d . Gravitational forces can be neglected.

Input values:

$$a = 2 \text{ m}, \quad \phi d = 30 \text{ mm}, \quad E = 2 \cdot 10^5 \text{ MPa},$$

$$b = 1 \text{ m}, \quad F = 400 \text{ N}, \quad \sigma_K = 300 \text{ MPa}.$$



flexion

Castigliano's theorem

supported beam