

Remarks: See §2.2.1, pages 19 till 21
See §2.3, pages 24 till 26
See §2.6, pages 34 onwards

Answers:

- a. $\Delta \ell_b = -3,48 \text{ mm}$
- b. $\Delta \ell_t = +34,92 \text{ mm}$
- c. $38,40 \text{ mm}$

Explanation:

$$\text{a. } \Delta \ell_b = \frac{(-1100 \text{ kN})(6000 \text{ mm})}{(30 \text{ kN/mm}^2)(63,2 \times 10^3 \text{ mm}^2)} = -3,48 \text{ mm}$$

$$\text{b. } \Delta \ell_t = \frac{(+1100 \text{ kN})(6000 \text{ mm})}{(210 \text{ kN/mm}^2)(900 \text{ mm}^2)} = +34,92 \text{ mm}$$

$$\text{c. } |\Delta \ell_b| + |\Delta \ell_t| = 38,40 \text{ mm}$$