

[Remarks:](#) See § 4.4, pages 168 till 170

[Hints:](#)

Draw the V and M diagrams.

The moment is maximum where the shear force is zero or where the sign changes.

[Answers 4.26-1](#)

$$\sigma_{\max} = \pm 10 \text{ N/mm}^2 \text{ (Support point moment)}$$

Tension at the top, compression at the bottom

[Explanation:](#)

$$I_{zz} = 5 \times 10^6 \text{ mm}^4$$

Moment at the support point: 1 kNm (\cap)

From a good sketch of the moment diagram one can read directly that the maximum span moment in absolute sense smaller than the moment at the support point. The maximum span moment is 0.75 kNm (\cup) and is located 1.58 m. from left support. The support point moment causes the maximum bending stress..

[Answers 4.26-2](#)

$$\sigma_{\max} = \pm 13,3 \text{ N/mm}^2 \text{ (Maximum span moment)}$$

Compression at the bottom, tension at the top

[Explanation:](#)

$$I_{zz} = 5 \times 10^6 \text{ mm}^4$$

Support point moment: 1 kNm (\cap)

The maximum span moment is 1,33 kNm (\cup) and is located 1,72 m from the left support.

The span moment causes the maximum bending stress.