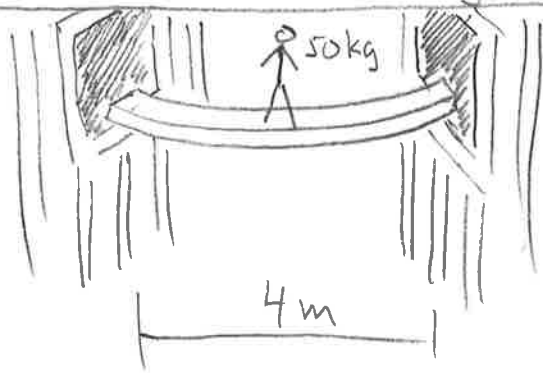


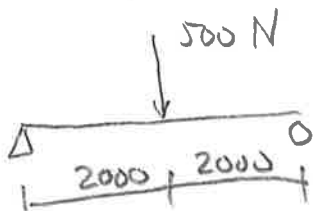
Hur stor blir nedböjningen?



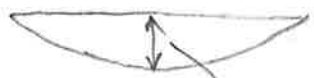
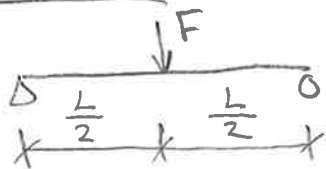
$$b=200 \quad h=30$$

trä

$$E = 10\,000 \frac{N}{mm^2}$$



Formler



$$\delta_{\max} = \frac{F \cdot L^3}{48 \cdot E \cdot I} \quad (1)$$

$$I = \frac{b \cdot h^3}{12} \quad (2)$$

Lösning

insättning i (2) \Rightarrow

$$I = \frac{200 \cdot 30^3}{12} = 450\,000$$

insättning i (1) \Rightarrow

$$\delta_{\max} = \frac{500 \cdot 4000^3}{48 \cdot 10\,000 \cdot 450\,000}$$

$$\approx 148 \text{ [mm]}$$

SVAR: Maximal nedböjning på mitten blir cirka 15 cm