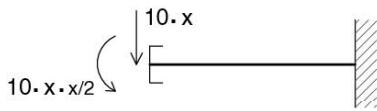
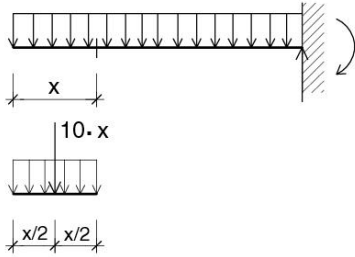
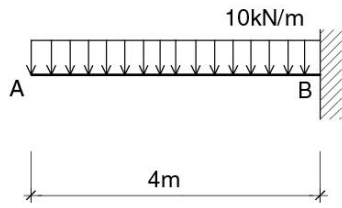
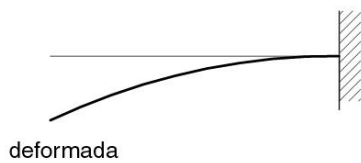
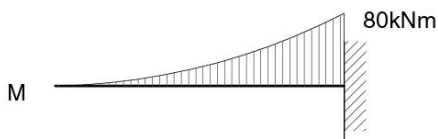
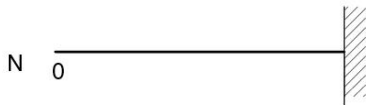


Resolução:

3



corte



$$N(x) = 0$$

$$V(x) = -p \cdot x = -10 \cdot x \quad (\text{sentido anti-horário})$$

$$V(0) = -10 \cdot 0 = 0$$

$$V(4) = -10 \cdot 4 = -40 \text{ kN}$$

$$M(x) = (p \cdot x) \cdot x/2 = 5 \cdot x^2 \quad (\text{tracionando as fibras superiores})$$

$$M(0) = 0$$

$$M(4) = 5 \cdot 4^2 = 80 \text{ kNm}$$

a concavidade da linha elástica é voltada para o lado comprimido da barra

e a tangente à linha elástica no engastamento é horizontal.