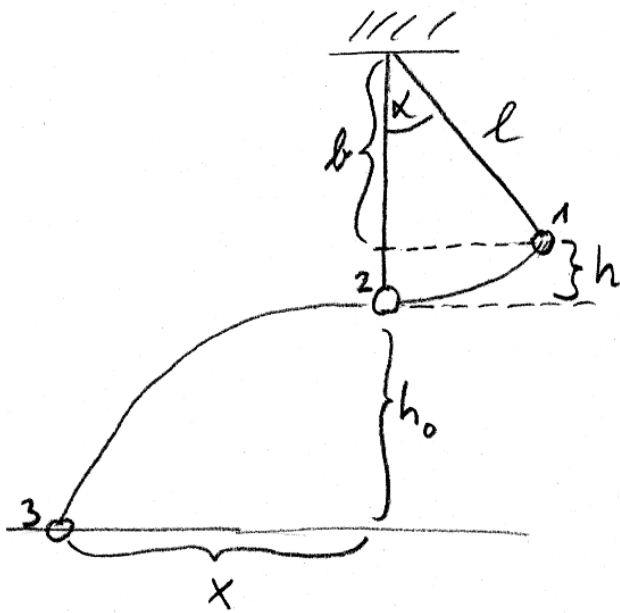


S. 79/5



geg.: l, α, h_0

ges.: x

Lösung: $\cos \alpha = \frac{b}{l} \Rightarrow b = l \cdot \cos \alpha$

$$h = l - b = l - l \cdot \cos \alpha = l(1 - \cos \alpha)$$

$$E_{\text{pot},1} = E_{\text{kin},2}$$

$$m \cdot g \cdot h = \frac{m}{2} v_2^2$$

$$v_2 = \sqrt{2gh} = \sqrt{2g \cdot l(1 - \cos \alpha)}$$

$$-h_0 = -\frac{g}{2} t^2 \Rightarrow t = \sqrt{\frac{2h_0}{g}}$$

$$x = v_2 t = v_2 \cdot \sqrt{\frac{2h_0}{g}} = \sqrt{2gl(1 - \cos \alpha)} \cdot \sqrt{\frac{2h_0}{g}}$$

$$= 2 \sqrt{h_0 l (1 - \cos \alpha)}$$