



$K = 500 \text{ N/m}$
 $m = 17 \text{ kg}$ $\mu_{\text{ost}} = 0.15$
 $\alpha = 30^\circ$

$P_x = P \cdot \sin \alpha = m \cdot g \cdot \sin \alpha$
 $P_y = P \cdot \cos \alpha = m \cdot g \cdot \cos \alpha$

$\Sigma F_y = 0$
 $N - P_y = 0 \Rightarrow N = P_y = m \cdot g \cdot \cos 30$

$\Sigma F_x = m \cdot a$
 $\Sigma F_x = 0$
 $P_x - F_r - F_E = 0$

$61,66 - 500x = 0$
 $61,66 = 500x$
 $x = \frac{61,66}{500} = 0,12 \text{ m}$
 12 cm.

$m \cdot g \cdot \sin 30 - \mu \cdot N - kx = 0$
 $m \cdot g \cdot \sin 30 - \mu \cdot m \cdot g \cdot \cos 30 - kx = 0$
 $17 \cdot 9,8 \cdot \sin 30 - 0,15 \cdot 17 \cdot 9,8 \cdot \cos 30 - 500 \cdot x = 0$
 $83,3 - 21,64 - 500x = 0$