



$$s = 0,03 \text{ m}$$

$$v_0 = 400 \frac{\text{m}}{\text{s}} \quad v_k = 30 \frac{\text{m}}{\text{s}}$$

$$m = 0,016 \text{ kg}$$

$$F_T = m \cdot a \cdot F_{\text{rot}}$$

$$F_T = F_{\text{myg}}$$

$$s = v_0 t - \frac{1}{2} a t^2$$

$$v = v_0 - a t$$

$$v - v_0 = -a t$$

$$v_0 - v = a t$$

$$a = \frac{v_0 - v}{t}$$

$$s = v_0 t - \frac{1}{2} \frac{v_0 - v}{t} t^2$$

$$2s = 2v_0 t - t(v_0 - v)$$

$$2s = t(2v_0 - (v_0 - v))$$

$$\frac{2s}{2v_0 - v_0 + v} = t \quad t = \frac{2 \cdot 0,03 \text{ m}}{v_0 + v} =$$

$$= \frac{2 \cdot 0,03 \text{ m}}{400 \frac{\text{m}}{\text{s}} + 30 \frac{\text{m}}{\text{s}}} = \frac{0,06 \text{ m}}{430 \frac{\text{m}}{\text{s}}} = 1,4 \cdot 10^{-4} \text{ s}$$

$$a = \frac{v_0 - v}{t} = \frac{400 \frac{\text{m}}{\text{s}} - 30 \frac{\text{m}}{\text{s}}}{1,4 \cdot 10^{-4} \text{ s}} = \frac{370 \frac{\text{m}}{\text{s}}}{1,4 \cdot 10^{-4} \text{ s}} = 2642857,14 \frac{\text{m}}{\text{s}^2}$$

$$F_T = m a = 42286 \text{ N}$$