



$$\begin{aligned} \text{if } \ddot{x} &= K \\ \Rightarrow \dot{x} &= Kt \\ \Rightarrow x &= \frac{1}{2} K t^2 \end{aligned}$$

$$\boxed{\sum F_R = M \ddot{x}}$$

$$\begin{aligned} M1: P_1 - T_1 &= M_1 \ddot{x} \\ M2: P_2 - T_1 &= M_2 \ddot{x} \end{aligned}$$

$$P = m \cdot g$$

$$\begin{aligned} (P_1 - P_2) + (-T_1 + T_1) &= M_1 \ddot{x} + M_2 \ddot{x} \\ P_1 - P_2 &= (M_1 + M_2) \ddot{x} \end{aligned}$$

$$\begin{aligned} \ddot{x} &= \frac{P_1 - P_2}{M_1 + M_2} = \frac{(1000 \cdot 9,8) - (850 \cdot 9,8)}{1000 + 850} \\ &= \frac{(1000 - 850) \cdot 9,8}{1000 + 850} \end{aligned}$$

$$\ddot{x} = \frac{1000 - 850}{1000 + 850} \times g$$

$$\begin{aligned} &= 8,1\% \times 9,8 \\ &\approx 0,8 \text{ (m/s}^2\text{)} \end{aligned}$$

every second that passes by the speed is incremented by $0,8 \text{ (m/s)}$.

$$\begin{aligned} \downarrow \ddot{x} &= 0,8 \text{ [m/s}^2\text{]} \\ \boxed{M_1} & \end{aligned}$$

$$x = \frac{1}{2} \ddot{x} t^2$$

parabolic motion behavior.