

S.113/13

$$m = 1,01 \cdot m_0$$

$$\frac{m_0}{\sqrt{1 - \left(\frac{v}{c}\right)^2}} = 1,01 m_0 \quad \sqrt{1 - \left(\frac{v}{c}\right)^2} = \frac{1}{1,01} \quad 1 - \left(\frac{v}{c}\right)^2 = \frac{1}{1,01^2}$$

$$\rightarrow 1 - \frac{1}{1,0210} = \left(\frac{v}{c}\right)^2 \rightarrow \frac{v}{c} = \sqrt{1 - \frac{1}{1,0210}} \rightarrow v = 0,14 c$$

$$v = 0,14 \cdot 3,0 \cdot 10^8 \frac{m}{s} = 4,2 \cdot 10^7 \frac{m}{s} \quad \text{bzw.} \quad 14\% \text{ von } c$$