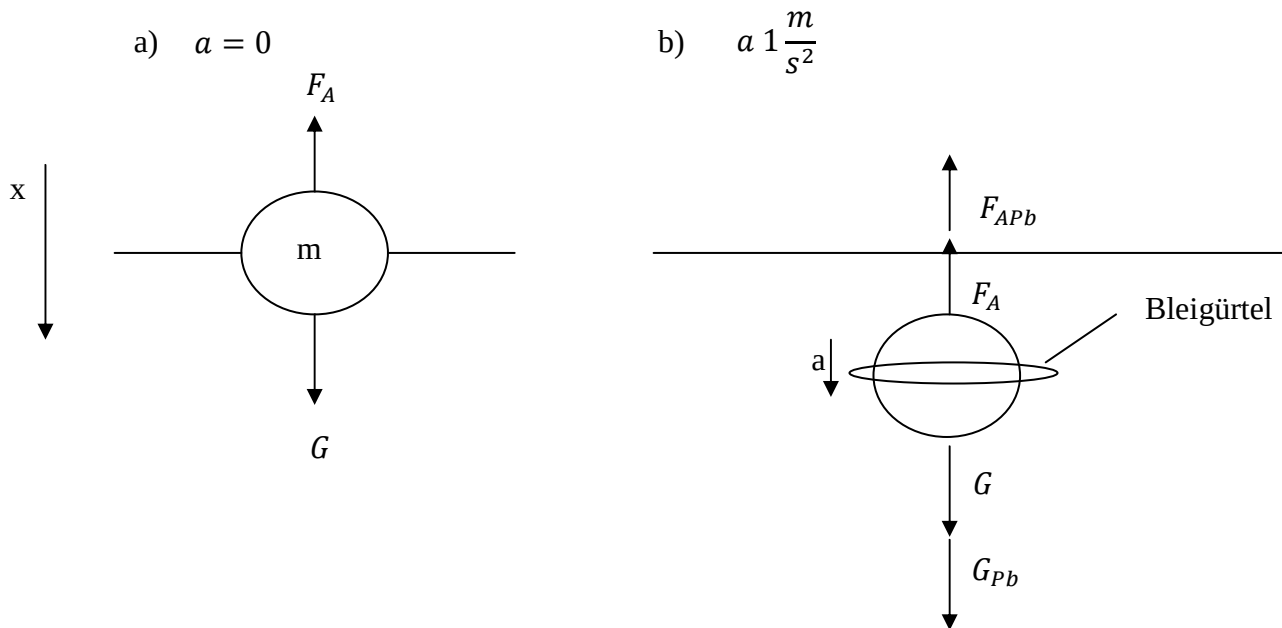




a)

$$m \cdot a = G - F_A = 0$$

$$m \cdot a = m \cdot g - \rho_L \cdot \frac{1}{2} \cdot V_V \cdot g = 0$$

$$\rho_L \cdot V_V \cdot g = 2 \cdot m \cdot g$$

b)

$$m \cdot a \neq 0 = G + G_{Pb} - F_A - F_{APb}$$

$$m \cdot a = m \cdot g + m_{Pb} \cdot g - \rho_L \cdot V_V \cdot g - \rho_L \cdot V_{VPb} \cdot g$$

$$m \cdot a = m \cdot g + m_{Pb} \cdot g - 2 \cdot m \cdot g - \rho_L \cdot V_{VPb} \cdot g$$

$$m \cdot a = +m_{Pb} \cdot g - m \cdot g - \rho_L \cdot \frac{m_{Pb}}{\varphi_{Pb}} \cdot g$$

$$m \cdot a + m \cdot g = m_{Pb} \cdot g - m_{Pb} \cdot \frac{\rho_L}{\varphi_{Pb}} \cdot g$$

$$m \cdot a + m \cdot g = m_{Pb} \cdot g \cdot \left(1 - \frac{\rho_L}{\varphi_{Pb}}\right)$$

$$m_{Pb} = \frac{m \cdot a + m \cdot g}{g \cdot \left(1 - \frac{\rho_L}{\varphi_{Pb}}\right)} = \frac{100Kg \cdot \left(1 \frac{m}{s^2} + 9,81 \frac{m}{s^2}\right)}{9,81 \frac{m}{s^2} \cdot \left(1 - \frac{11 \frac{kg}{dm^3}}{11 \frac{kg}{dm^3}}\right)} = 121,21kg$$
