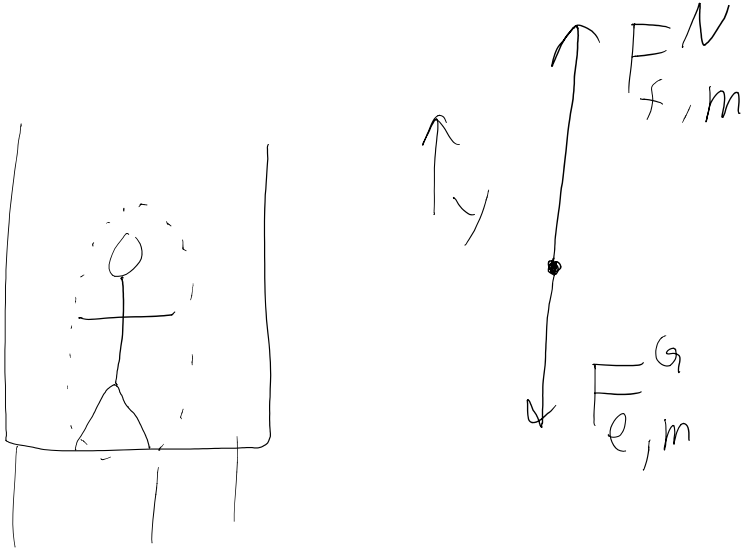


An elevator is lifting a 80kg man up. If he started from rest and the elevator accelerates to a final speed of 4 m/s in 2 seconds what was the apparent weight of the man during the acceleration?



$$\sum F_y = m a_y$$

$$+ F_{f,m}^N - F_{e,m}^G = m \cdot a_y$$

$$F_{f,m}^N - m g = m \cdot a_y$$

$$F_{f,m}^N - 80 \cdot 9.8 = 80 \cdot 2$$

$$F_{f,m}^N = 160 + 784 = \boxed{944 \text{ N}}$$

$$V_f = V_i + a_y \Delta t$$

$$+4 = 0 + a_y (2)$$

$$2 \frac{\text{m}}{\text{s}^2} = a_y$$