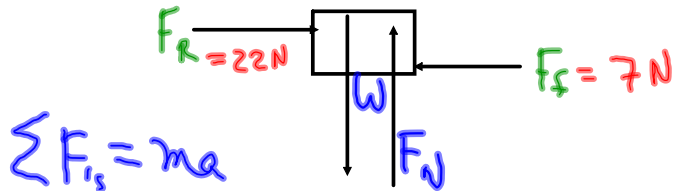


$$[3 \text{ grams}] \left[\frac{1 \text{ kg}}{1000 \text{ grams}} \right] = 0.003 \text{ kg}$$



$$\sum F_i = ma$$

$$F_R - F_f = ma$$

$$22 \text{ N} - 7 \text{ N} = \frac{15 \text{ N}}{.003} = (.003)(a) = \underline{\text{net force}}$$

$$W = \text{WEIGHT} \\ = (m \times g) = mg$$

$$a = 5000 \frac{\text{m}}{\text{s}^2}$$

F_N = NORMAL FORCE = THE FORCE OF REACTION TO A WEIGHT THAT IS "⊥" TO THE INTERFACE BETWEEN THE TWO SURFACES OF CONTACT.

⊥ ⇒ PERPENDICULAR

W = WEIGHT OF AN OBJECT → THE FORCE ON THE OBJECT DUE TO GRAVITY

$$W = mg$$

$$\text{vs} \\ F = ma$$

∴ weight of ~ 1 kg mass ⇒

$$\rightarrow (1 \text{ kg}) \left(9.81 \frac{\text{m}}{\text{s}^2} \right) = 9.81 \text{ N}$$

$$1 \text{ kg} \Rightarrow \sim 2.2 \text{ LBS}$$

$$\frac{9.81 \text{ N}}{2.2 \text{ LBS}} = \left[\frac{4.45 \text{ N}}{\text{LBS}} \right]$$