

Let's Try one together

- a) A German shepherd dog has a mass of 31 kg. What would be his weight on earth?



$$\begin{aligned} \text{Weight} &= 31 \cancel{\text{kg}} \times \frac{9.8 \text{ N}}{1 \cancel{\text{kg}}} \\ &= 303.8 \text{ N} \end{aligned}$$

- b) Max ^{mass} mass is 150 lbs $\xrightarrow{\div 2.2}$ 68kg, what is his weight on earth?

$$\begin{aligned} \text{Weight} &= \text{mass}^{(\text{kg})} \times \frac{9.8 \text{ N}}{1 \text{ kg}} \\ &= 68 \cancel{\text{kg}} \times \frac{9.8 \text{ N}}{1 \cancel{\text{kg}}} \\ &= 666.4 \text{ N} \end{aligned}$$

c) Moon Gravity = $\frac{1.625 \text{ N}}{1 \text{ kg}}$

You Try

Assume you have a mass of 50 kg. What would be your weight on earth? (9.8 N/Kg)

$$\begin{aligned}\text{Weight} &= \text{mass} \times \text{Force} \\ &= 50\text{kg} \times \frac{9.8\text{N}}{1\text{kg}} \\ &= 490\text{N}\end{aligned}$$

Supplies soon needed for activity