Chapter 3 Weight/Force of Gravity Practice Worksheet

\[ \text{F}_w = g \text{ m} = (9.8 \text{ N/kg}) \cdot m \]

Units of Force are Newtons. \( N = \text{kg} \cdot \text{m/s}^2 \)

1. What is the weight of a 7.0 kg bowling ball on Earth’s surface?

2. What is the weight of a 7.0 kg bowling ball on the surface of the moon?
   \( (g = 1.6 \text{ N/kg on the moon}) \)

3. What is the mass of a 7.0 kg bowling ball on the surface of the moon?

4. Calculate the weight (in Newtons) of a 5.0 kg backpack on Earth.

5. A physics textbook has a mass of 2.2 kg. What is its weight on Earth?

6. What is the physics textbook’s weight on Mars? \( (g = 3.7 \text{ N/kg on Mars}) \)