MASS VS. WEIGHT PRACTICE PROBLEMS
Answer the following questions in your science notebook in complete sentences. If math, show all your work, including units.

1. The force due to gravity acting on an object is called what?

2. The quantity of matter in an object is called what?

3. A man has a mass of 66 kg on Earth. What is his weight in Newtons? What is his weight in pounds?

4. Uncle Harry weighs 180 pounds. What is his mass in kilograms?

5. Aunt Jane weighs 145 pounds. What is her weight in Newtons?

6. A woman has a mass of 55 kg on Earth.
   a. What is the woman’s mass on the moon?
   b. What would be the woman’s weight on the moon where the acceleration due to gravity is 1.67 m/s²? Calculate the weight in both Newtons and pounds.

7. A man has a mass of 80 kg on Earth.
   a. What is the man’s weight on Earth in Newtons? What is the man’s weight on Earth in pounds?
   b. What is the man’s weight on Mars where the acceleration due to gravity is 3.7 m/s²? Show your answer in both Newtons and pounds.
   c. What is the man’s mass while on Mars? Explain your answer.