

Mass and Weight Practice

$$w=mg$$

*Directions: show all the work for each problem on a separate sheet of paper using the GUESS and CER method*

- 1) What is the link between mass and weight?
- 2) For mass, what is its definition? SI units? What does it depend on?
- 3) For weight, what is its definition? SI units? What does it depend on?
- 4) What is the mass of a 12 N object? (1.2 kg)
- 5) What is the weight of a 74 kg object? (740 N)
- 6) What is the weight of a 6.8 kg object in pounds? (14.96 lbs)
- 7) Find the weight of a 500 N box in pounds. (110 lbs)
- 8) What is the mass of an 82 kg object? (82 kg)
- 9) What is the weight of a 0.25 kg object? (2.5 N)
- 10) What is the weight of a 126 kg object? (1260 N)
- 11) What is the weight of a 14 N object? (14 N)
- 12) What is the mass of a 238.5 N object? (23.85 kg)
- 13) A 60 kg girl stands on a bathroom scale. What will the scale read (in scientific units for weight) if she stands perfectly still? (600 N)
- 14) A 20 kg crate of physics books is at rest on a table. What is the weight of the book? What force does the table support the book with? (200 N, 200 N)
- 15) On the surface of the earth, how much does an 11 kg mass weigh?  
(110 N)
- 16) On the surface of the earth a box weighs 49 N. What is its mass? (4.9 kg)