Intro Physics Unit - The Measure of Science Worksheet (Part 1)

1. Express the following measurements in scientific notation
   a. 5800 m b. 450 000 m c. 302 000 000 m
   d. 86 000 000 000 m e. 0.000 508 kg f. 0.000 000 45 kg

2. Convert each of the following length measurements to its equivalent in meters
   a. 1.1 cm b. 76.2 pm c. 5.4 km

3. Convert each of these mass measurements to its equivalent in kilograms.
   a. 147 g b. 11 μg c. 1500 mg

4. Solve the following problems, express your answers in scientific notation.
   a. $(5 \times 10^{-7}\ kg) + (3 \times 10^{-7}\ kg)$ b. $(4 \times 10^{-3}\ kg) + (3 \times 10^{-3}\ kg)$
   c. $(1.66 \times 10^{-19}\ kg) + (2.30 \times 10^{-19}\ kg)$ d. $(7.2 \times 10^{-12} kg) - (2.6 \times 10^{-12}\ kg)$
   e. $(6 \times 10^{-8}\ m^2) - (4 \times 10^{-8}\ m^2)$

5. Find the value of each of the following quantities
   a. $(2 \times 10^{4}\ m)(4 \times 10^{8}\ m)$ b. $(3 \times 10^{4}\ m)(2 \times 10^{6}\ m)$

6. Find the value of each of the following quantities.
   a. $\frac{6\ x\ 10^{-8}\ m}{2\ x\ 10^{-4}\ s}$ b. $\frac{(3\ x 10^{4}\ kg)(4\ x\ 10^{4}\ m)}{6\ x\ 10^{4}\ s}$