**Date:\_\_\_\_\_\_\_\_\_**

1. Replace the metric prefix with the appropriate power of 10 and simplify to express the

quantity in one of the following base units (m, g, s).

**e.g.** 0.00864 km **=** 0.00864 **x 103 m** = 8.64 x 10-3 x 103 m = 8.64 m

a) 0.00045 ds = b) 5.6 x 10-4 Gm =

c) 8.69 x 105 μs = d) 846 pg =

e) 7.5 x 1014 ns = f) 5.8 x 10 –5 km =

2. Perform the following units conversions using the “multiply by one” method and express the results in

scientific notation.

a) 45 789 m = ? mm b) 773 pm = ? nm

c) 1.5 Ms = ? Gs d) 0.00186 ms = ? μs

e) 56 nm = ? cm f) 6.5 years = ? seconds

g) 135 km/h = ? m/s h) 798 mm2 = ? cm2

i) 32 m/s = ? km/h j) 785 cm3 = ? m3

3. Analyze the questions below to determine **the units** that would result from each of the following

calculations.

a) 2 cm/s x 15 s b) 8 m ÷ 6s c) 25 m/s2 x 2s

d) 5 m/s ÷0.2 s e) 2.5 kg ÷ 1.9 kg/m3 f) 7 kg•m/s2 x 3.2 m