**Science 10: Scientific Notation, Metric, Unit Conversions**

1. Write the following in scientific notation:

a. 125cm b. $2100000 c. 0.0000045kg d. 60000.04m/s e. 0.044oC

f. 177000000000000000000000s g. 0.000000000000000000054C h. 126x106h

i. 0.256x105kg j. 56.9x10-11m k. 633x1014s l. 0.00658x103N

2. Complete the following basic metric conversions:

a. 23.5cm$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ =\_\_\_\_\_\_\_\_\_\_\_\_m

b. 36L $ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ =\_\_\_\_\_\_\_\_\_\_\_\_mL

c. 3.0x108m$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ =\_\_\_\_\_\_\_\_\_\_\_\_km

d. 1 000 000mg$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ =\_\_\_\_\_\_\_\_\_\_\_\_g

e. 30km$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ = \_\_\_\_\_\_\_\_\_\_\_\_\_mm

f. 235kg$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_hg

g. 644ms $ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hs

h.

f. 50kg/L$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ = \_\_\_\_\_\_\_\_\_\_\_\_\_ mg/mL

g. 120km/h$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ = \_\_\_\_\_\_\_\_\_\_\_\_\_ m/s

h. 20.0m/s h$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_km/h

h. 123mph$ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ =\_\_\_\_\_\_\_\_\_\_\_\_\_\_m/s

(1.00km = 0.621 mile)

i. 3.0m2 $ ×\left(\frac{ }{ }\right)× \left(\frac{ }{ }\right)×\left(\frac{ }{ }\right)$ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cm2

**Physics 11: Unit Conversions**

**1. Complete the following conversions:**

a. 23.5cm =\_\_\_\_\_\_\_\_\_\_\_\_km

b. 36L =\_\_\_\_\_\_\_\_\_\_\_\_mL

c. 3.0x108m/s =\_\_\_\_\_\_\_\_\_\_\_\_km/h

d. 1 000 000mg/L =\_\_\_\_\_\_\_\_\_\_\_\_g/ml

e. 30km/h = \_\_\_\_\_\_\_\_\_\_\_\_\_m/s

f. 50km/h = \_\_\_\_\_\_\_\_\_\_\_\_\_ m/s

g. 120km/h = \_\_\_\_\_\_\_\_\_\_\_\_\_ m/s

h. 123mph =\_\_\_\_\_\_\_\_\_\_\_\_\_\_m/s

(use your text to find conversion factors)

**2. Complete the following time conversions.**

1. 1.2h = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ s
2. 1h 20min = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ s
3. 2500s = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ h
4. 1 day, 16h, 4 min, 12s = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ s
5. 1 day, 16h, 4 min, 12s = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ h
6. 1 day, 16h, 4 min, 12s = \_\_\_\_\_\_\_\_\_\_\_\_\_ min
7. 369.82min = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ s
8. 3h 47.6min = \_\_\_\_\_\_\_\_\_\_\_\_\_\_s

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