Unit Conversions-Solutions

Make the following conversions, and write your answers using appropriate abbreviations. *Challenge: convert your answers to scientific notation.*

1)   5.1 meters to millimeters

$$\frac{5.1m}{1} \times \frac{1000mm}{1m} = 5,100mm$$

$$5,100mm = 5.1 \times 10^3\, mm$$

6)   2.1 meters to centimeters

$$\frac{2.1m}{1} \times \frac{100cm}{1m} = 210cm$$

$$210cm = 2.1 \times 10^2\, cm$$

2)   2000 microamperes to amperes

$$\frac{2000\,\mu amp}{1} \times \frac{1amp}{1,000,000\,\mu amp} = .002amp$$

$$.002amp = 2 \times 10^{-3}\, amp$$

7)   3.4 grams to kilograms

$$\frac{3.4g}{1} \times \frac{1kg}{1000g} = .0034kg$$

$$.0034kg = 3.4 \times 10^{-3}\, kg$$

3)   809 milligrams to grams

$$\frac{809mg}{1} \times \frac{1g}{1000mg} = .809g$$

$$.809g = 8.09 \times 10^{-1}\, g$$

8) 0.2 Megaseconds to seconds

$$\frac{.2Ms}{1} \times \frac{1,000,000s}{1Ms} = 200,000s$$

$$200,000s = 2 \times 10^5\, s$$

4)   123 picograms to grams

$$\frac{123pg}{1} \times \frac{1g}{1,000,000,000,000\,pg} = .000000000123g$$

$$.000000000123g = 1.23 \times 10^{-10}\, g$$

9)   23 gigameters to meters

$$\frac{23Gm}{1} \times \frac{1,000,000,000m}{1Gm} = 23,000,000,000m$$

$$23,000,000,000m = 2.3 \times 10^{10}\, m$$

5)   198 nanometers to meters

$$\frac{198nm}{1} \times \frac{1m}{1,000,000,000nm} = .000000198m$$

$$.000000198m = 1.98 \times 10^{-7}\, m$$

10)   1.34 dekagrams to grams

$$\frac{1.34dag}{1} \times \frac{10g}{1dag} = 13.4g$$

$$13.4g = 1.34 \times 10^1\, g$$