Name: Date: Pd:

Metric and Chemistry Conversions Practice

Chemistry Conversion Factors:

1 mole = 6.022×10^{23} atoms/molecules	1 mole = 22.4 L of gas

Common Prefixes Used with SI Units			
Prefix	Symbol	Conversion Factor to Base Unit	Order of Magnitude
Giga-	G	1,000,000,000 base = 1 Giga	10^{9}
Mega-	M	1,000,000 base = 1 Mega	10^{6}
kilo-	k	1,000 base = 1 kilo	10^{3}
hecto	h	100 base = 1 hecto	10^{2}
deka-	da	10 base = 1 deka	10^{1}
	Base Unit	1 base	10^{0}
deci-	d	1 base = 10 deci	10^{-1}
centi-	c	1 base = 100 centi	10^{-2}
milli-	m	1 base = 1,000 milli	10^{-3}
micro-	μ	1 base = 1,000,000 micro	10^{-6}
nano-	n	1 base = 1,000,000,000 nano	10^{-9}
pico-	p	1 base = 1,000,000,000,000 pico	10^{-12}

Complete the conversions below with a partner. Show all work and round to correct sig figs w/units:

1.9×10^{-3} Hz = _____ GHz	**1.25 mol of O_2 = _____ L of O_2**	**8.43 km = _____ meters**
7.54×10^{19} atoms Mg = _____ mol Mg	**1.5 Gigabyte (GB) = _____ bytes (Bytes is a base unit)**	**87.54 L of Methane = _____ mol Methane**
8.65 L of CO_2 = _____ atoms CO_2	**1.23×10^{25} microliters = _____ L**	***9.54 GHz = _____ mHz (millihertz)**

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Team Quiz:

- ***Show all work and round your final answer to two decimal places with units:***

1.	2.	3.
4.	5.	6.

Reflect:

Write a short paragraph below describing how to do ANY dimensional analysis conversion: