

Name _____

Period _____

Quiz 1: Element Names and Chemical Symbols

Please provide the names of the elements with the following chemical symbols:

1. H hydrogen

6. O oxygen

2. P phosphorus

7. Ne neon

3. Ca calcium

8. Cl chlorine

4. Si silicon

9. N nitrogen

5. Na sodium

10. Li lithium

Please provide the chemical symbols of the following elements:

1. Sulfur S

6. Boron B

2. Argon Ar

7. Aluminum Al

3. Carbon C

8. Potassium K

4. Fluorine F

9. Beryllium Be

5. Helium He

10. Magnesium Mg

Please provide the number equivalent for each metric prefix below (ex. Kilo = 10^3):

1. Giga

10^9

6. Deca

10^1

2. Milli

10^{-3}

7. Hecto

10^2

3. Micro

10^{-6}

Please provide the metric prefix for each number below (ex. 10^{-2} = Centi):

1. 10^{-12}

pico

4. 10^{12}

tera

2. 10^6

mega

5. 10^{-1}

deci

3. 10^{-9}

nano

Please complete the following problems:

1. 5 mg of B equals how many Mg of B?

$$\frac{5 \text{ mg}}{10^3 \text{ mg}} \times \frac{1 \text{ g}}{10^6 \text{ g}} = \frac{5}{(10^3)(10^6)} = 5 \times 10^{-9} \text{ Mg B}$$

2. A chemist has 15 kL of He gas. He wants to fill 100 balloons with all of the He gas. What volume of He should the chemist put in each balloon?

$$\frac{15 \text{ kL}}{100} = \frac{15 \times 10^3 \text{ L}}{10^2} = 15 \times 10 \text{ L} = 150 \text{ L} = 0.15 \text{ kL/balloon}$$

EC Assume that at 100 K it takes 5 min to evaporate 5 g of fluorine and 50 minutes to evaporate 10 g of carbon. If you have a sample of 11 g of fluorine and 3 g of carbon, how long will it take to evaporate all of the gas? Assume that the fluorine gas and carbon gas evaporate at the same time.

$$\frac{11 \text{ g F}_2}{5 \text{ g F}_2} \times 5 \text{ min} = 11 \text{ min}$$

$$15 \text{ min} > 11 \text{ min}$$

$$\frac{3 \text{ g C}}{10 \text{ g C}} \times 50 \text{ min} = 15 \text{ min}$$

Total time to evaporate both gases = 15 min.

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