Name:_____

Blk:_____Date:_____

CLASS STARTER CHEMISTRY 11

1. The density of mercury is 13.6 g/mL. What is the **mass (in Kg)** of 1.00 L of mercury?

2. Silver has a density of 10.5 g/cm^3. If you have a silver coin with the mass of 6.00 x 10^{-3} kg (about the size of a Canadian quarter), what is the **volume** of the coin in **mL?** (if 1 cm^3 = 1 mL)

3. The maximum highway speed in British Columbia is 120 km/h, express this speed in the units of **metres per second**.

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CLASS STARTER CHEMISTRY 11

1. The density of mercury is 13.6 g/mL. What is the **mass (in Kg)** of 1.00 L of mercury?

$$1.00\,L\left(\frac{1\,mL}{1\cdot10^{-3}\,L}\right)\left(\frac{13.6\,g}{1\,mL}\right)\left(\frac{1\,kg}{1\cdot10^{3}\,g}\right)=\boxed{13.6\,kg}$$

2. Silver has a density of 10.5 g/cm^3. If you have a silver coin with the mass of 6.00 x 10^{-3} kg (about the size of a Canadian quarter), what is the **volume** of the coin in **mL?** (if 1 cm^3 = 1 mL)

$$6.00\cdot10^{-3}\,kg\left(\frac{1\cdot10^{3}\,g}{1\,kg}\right)\left(\frac{1\,cm^3}{10.5\,g}\right)\left(\frac{1\,mL}{1\,cm^3}\right)=\boxed{0.571\,mL}$$

3. The maximum highway speed in British Columbia is 120 km/h, express this speed in the units of **metres per second**.

$$\frac{120\,km}{1\,h}\cdot\left(\frac{1\cdot10^{3}\,m}{1\,km}\right)\left(\frac{1\,h}{60\,min}\right)\left(\frac{1\,min}{60\,s}\right)=\boxed{33\,\frac{m}{s}}$$