1.572×10^8 *troy oz of silver were used in the United States in 1980. How many kilograms is this? (1 troy oz = 31.1 g)*

A) $5.05 \times 10^3 \ kg$

B) $4.89 \times 10^{12} \ kg$

C) $4.89 \times 10^6 \ kg$

D) $5.05 \times 10^6 \ kg$

E) $4.89 \ kg$

==

A block of iron has a mass of 483 g. What is the mass of a block of graphite that has the same volume as the block of iron? The following densities at 25^oC are provided: (magnesium, $1.7 \ g/cm^3$); (graphite, $1.8 \ g/cm^3$); (iron, $7.9 \ g/cm^3$).

A) 34g

B) 2120 g

C) 6870 g

D) 110 g

E) none of them are within 10 g of the right answer

==

A centimeter corresponds to:

A) 10^{-2} *meters.*

B) 10^{-3} *meters.*

C) 10^{-6} *meters.*

D) 10^{-9} *meters.*

E) 10^{12} *meters.*

A microliter corresponds to:

   A) 10^{-2} *liters.*

   B) 10^{-3} *liters.*

   C) 10^{-6} *liters.*

   D) 10^{-9} *liters.*

   E) 10^{-12} *liters.*

==

A person weighs 150.0 *lb, and the correct dosage of a drug is given as*

1.50 *mg per kilogram of body weight. How many milligrams of the drug should be given?*

$(2.20\ lb\ =\ 1\ kg)$

   A) 102 mg

   B) 108 mg

   C) 112 mg

   D) 115 mg

   E) None of the above

==

A piece of a metal alloy with a mass of 114 *g was placed into a graduated cylinder that*

contained 25.0 *mL of water, raising the water level to* 42.5 *mL. What is the density of the*

metal?

   A) $6.51\ g/cm^3$

   B) $0.592\ g/cm^3$

   C) $0.154\ g/cm^3$

   D) $2.68\ g/cm^3$

   E) $7.25\ g/cm^3$

All of the following are properties of sodium. Which one is a physical property of sodium?

A) It is a solid at 25°C and changes to a liquid when heated to 98°C.

B) When placed in water it sizzles and a gas is formed.

C) When placed in contact with chlorine it forms a compound that melts at 801°C.

D) It's surface turns black when first exposed to air.

E) Sodium is never found as the pure metal in nature.

==

An automobile engine has a piston displacement of $1,600\ cm^3$. Express this volume in cubic inches. $(1\ in\ =\ 2.54\ cm)$

A) $.0998\ in^3$

B) $98\ in^3$

C) $9980\ in^3$

D) $9.8\ in^3$

E) None of the above

==

An organic liquid has a density of $1.2\ g/cm^3$. What is the mass of a $35.0\ cm^3$ sample of this liquid?

A) $29\ g$

B) $36\ g$

C) $42\ g$

D) $35g$

E) None of the above

Convert 4.5×10^4 *to decimal format.*

A) 0.000450

B) 0.0045

C) 45,000

D) 4,500

E) 0.00045

===

Convert 4.6 km to mm.

A) $4.6 \times 10^6 \ mm$

B) $4.6 \times 10^4 \ mm$

C) $4.6 \times 10^{-2} \ mm$

D) $4.6 \times 10^{-6} \ mm$

E) $4.6 \times 10^3 \ mm$

===

Convert $4.89 \ mm \ to \ \mu m.$

A) $4.89 \times 10^9 \mu m$

B) $4.89 \times 10^{-3} \mu m$

C) $4.89 \times 10^6 \mu m$

D) $4.89 \times 10^{-6} \mu m$

E) $4.89 \times 10^3 \mu m$

Dry ice (carbon dioxide) changes from a solid to a gas at $-78.5°C$. What is this temperature in °F?

A) -109°F

B) -75.6°F

C) -12.6°F

D) -173°F

E) none of them are within 2°F of the right answer

==

Express the number 0.000053 in scientific notation.

A) 5.3×10^{-2}

B) 5.3×10^{-3}

C) 5.3×10^{-4}

D) 5.3×10^{-5}

E) 5.3×10^{-6}

==

Express the number 26.7 in scientific notation.

A) 2.67×10^{-1}

B) 2.67×10^{1}

C) 2.67×10^{-2}

D) 2.67×10^{2}

E) 26.7 is already written in scientific notation

How many milliliters is 0.005 L ?

A) 0.000005 mL

B) 0.50 mL

C) 200 mL

D) 0.5 mL

E) 5 mL

===

How many significant figures are there in 0.3070 g ?

A) 2

B) 3

C) 4

D) 5

E) 6

===

In the process of fixing breakfast, you:

1. break open the egg

2. fry it

3. cut the fried egg into pieces

4. cut toast in half

Which one of these is **a chemical process**?

A) #1

B) #2

C) #3

D) #4

E) None of the above

The element Osmium (Os) has a density of $22.57\ g/cm^3$. What is the density in kg/m^3?

A) $2.257 \times 10^6 kg/m^3$

B) $2.257 \times 10^{-3} kg/m^3$

C) $2.257 \times 10^{-9} kg/m^3$

D) $2.257 \times 10^4 kg/m^3$

==

The piece of copper (Cu) metal weighing is $0.0001635\ g$. This quantity in correct

scientific notation is:

A) $1.635 \times 10^{+7}\ g$

B) $1.635 \times 10^{+4}\ g$

C) $1.635 \times 10^{-7}\ g$

D) $1.635 \times 10^{-4}\ g$

==

Which of the following is an extensive property?

A) Boiling point.

B) Volume.

C) Density.

D) Melting point.

==

Which of the following mixtures is a homogeneous mixture?

A) Solder.

B) Oil and water.

C) Ice cubes in soda water.

D) Iron filings in water.

Mr. Abdullah Mohamed　　　　　　　　　　　*@Chem31Phys*

Which of the following processes represents a chemical change?

A) Burning of magnesium.

B) Melting of solid sulfur.

C) Heating of iron rod.

D) Sublimation of iodine.

===

Which of the following measurements contains 4 significant figures?

A) 0.00080 g.

B) 14.77400 g.

C) 0.0170450 g.

D) 0.06804 g.

===

You just measured a sugar cube and obtained the following information:

mass = 3.48 g

height = length = width = 1.3 cm

Determine the volume and density of the cube. Suppose the sugar cube was added to a cup of water. Before it dissolves, will the sugar cube float or sink to the bottom?

A) Volume of the sugar cube = $2.2\ cm^3$; density of the sugar cube = $1.4\ g/cm^3$; sink

B) Volume of the sugar cube = $2.4\ cm^3$; density of the sugar cube = $1.6\ g/cm^3$; float

C) Volume of the sugar cube = $2.2\ cm^3$; density of the sugar cube = $1.6\ g/cm^3$; sink

D) None of these choices has the volume, density and sink or float decision reported correctly

Select True or False: *Newspaper burning is an example of a physical property.*

T True

F False

Select True or False: *Milk is a pure substance.*

T True

F False

Select True or False: *Melting point is an extensive property.*

T True

F False

Select True or False: *Mass is an intensive property.*

T True

F False

Select True or False: *Length is an intensive property.*

T True

F False

Select True or False: *Iced tea is a mixture.*

T True

F False

Select True or False: *Seven-Up® is a pure substance.*

T True

F False

Select True or False: Oxygen is an element.

T True

F False

Select True or False: Sugar to put in coffee is a compound.

T True

F False

Select True or False: Table salt is an element.

T True

F False

Select True or False: The SI base unit of time is the hour.

T True

F False

Select True or False: The corrosion of a metal is a physical change.

T True

F False

Calculate the significant figures in the measurement 0.000015620 mm?

5 significant figures

Define the term precision.

Precision – *how close a set of measurements are to each other*

What is the term that tells us how close a measurement is to the true value of the measured quantity?

Accuracy