

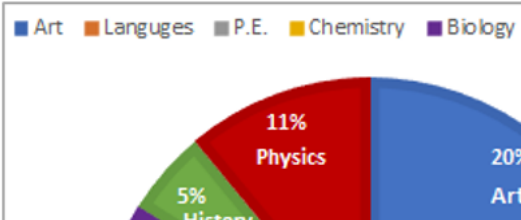
Mendeleev organized elements in order of increasing atomic mass, but he had to leave gaps in his periodic table. What did these spaces represent?

- a. ☐ Isotopes
- b. ☐ Radioactive elements
- c. ☐ Natural elements
- d. ☐ Undiscovered elements

Which of the following is a one of the uses for chlorine compounds?

- a. ☒ Disinfect water in swimming pools
- b. ☐ Used to study genetic material, such as DNA
- c. ☐ Necessary to produce thyroxine hormone
- d. ☐ Medical research due to their radioactive properties

The pie chart below shows the percentage of students according to their favorite subjects. The percentage of students who like to study science subjects (chemistry, biology,



a.



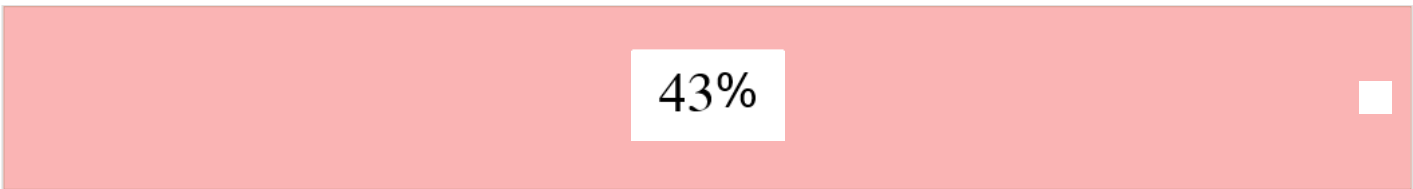
b.



c.



d.



Bernoulli examined the relationship between _____ ?



a.

Fluid flow and its pressure

☐

b.

Fluid temperature and its pressure

☐

c.

Fluid pressure and its potential energy

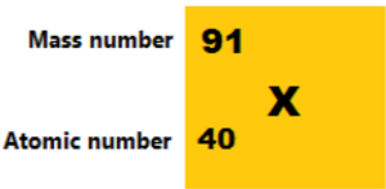
☐

d.

Fluid temperature and its kinetic energy

☐

Which of the following is correct for the element X, shown in the figure below?



	Electrons number	protons number	neutrons number
A.	51	40	91
B.	40	51	91

- a.

A

☐
- b.

B

☐
- c.

C

☐
- d.

D

☐

Which of the following figures is an example of **plasma state**?

a.

☐

b.

☐

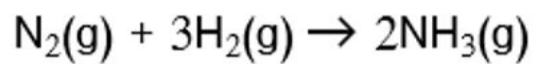
c.

☐

d.

☐

A 56.0 g sample of nitrogen gas reacts with 12.0 g hydrogen gas to form ammonia. What mass of ammonia is formed?



a.

22.0 g

☐

b.

34.0 g

☐

c.

46.0 g

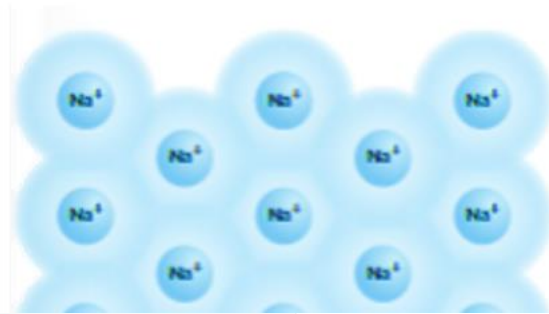
☐

d.

68.0 g

☐

What explains the metals property of being able to be hammered into sheets of



- a. ☐ The ions are in layers that slide past one another without losing their attraction to the electron sea
- b. ☐ The movement of the electron sea and the metal ions more easily
- c. ☐ The movement of electrons is fixed around the metallic cation
- d. ☐ The metallic cations are fixed and cannot move

What is the **similarity** between the elements of the first group and the s

The Alkali Metals

3	Li
11	Na
19	K
37	Rb
55	Cs

a.

Both found in the form of compounds in nature

☐

b.

Both found in gas and liquid state

☐

c.

Both have one electron in their outer energy level

☐

d.

Both must be stored without contact with oxygen

☐

What is the correct order of the steps in the scientific method to solve a problem?

- a. State the problem → Form a Hypothesis → Gather information → Analyze Data → Test the Hypothesis → Hypothesis is supported, or it's not supported
- b. State the problem → Gather information → Form a Hypothesis → Test the Hypothesis → Analyze Data → Hypothesis is supported, or it's not supported
- c. Gather information → Analyze Data → State the problem → Form a Hypothesis → Test the Hypothesis → Hypothesis is supported, or it's not supported
- d. Gather information → State the problem → Analyze Data → Form a Hypothesis → Test the Hypothesis → Hypothesis is supported, or it's not supported

How can colloids be distinguished from solutions?

a.

Colloid particles can be seen with the naked eye

☐

b.

Colloid particles can settle out of the mixture in time

☐

c.

Colloid particles are much smaller than solution particles

☐

d.

Colloids will scatter light beams that passes through them

☐

Copper has two isotopes:

Cu-63 (abundance = 69.2%, mass = 62.930 amu) and Cu-65 (abundance = 30.8%, mass =

What is the average atomic mass of copper?

a.

62.930 amu

☐

b.

63.545 amu

☒

c.

63.929 amu

☐

d.

64.928 amu

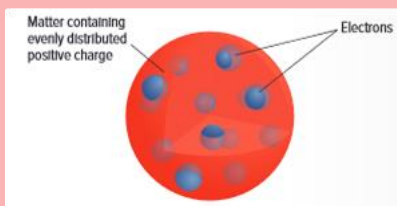
☐

Which of the following atomic models explained the electron jumps between orbits i
absorbs or release energy?

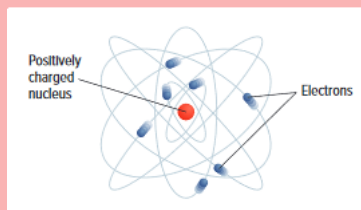
a.



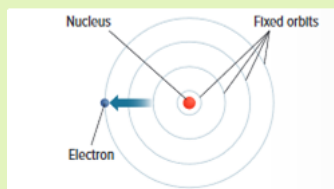
b.



c.



d.



A weather balloon has a volume of 2.50 L at 101 kPa. As the balloon rises the
What is the new volume of the balloon?



a.

2.66 L

☐

b.

2.35 L

☐

c.

3.83 L

☐

d.

4.11 L

☐

What do these elements shown in figure below have in common (similarities)?



- a. ☐ Chemical properties
- b. ☐ Total number of electrons
- c. ☐ Atomic mass
- d. ☐ Metal elements

Which of the following is **NOT** an assumption for the kinetic molecular theory?

a.

All matter is composed of tiny particles (atoms, molecules, and ions)

☐

b.

These particles are in constant, random motion

☐

c.

The particles collide with other and with the walls of any container in which they are

d.

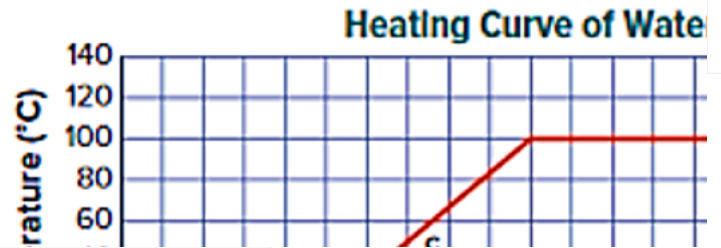
The amount of energy that the particle lose from these collisions is relatively high and

What does the upward arrow in the diagram below represent?



- a. Pressure ☐
- b. Weight ☐
- c. Buoyant force ☒
- d. Gravitational force ☐

In the heating curve of water below, in which intervals the temperature of water



a.

a & b only ☐

b.

a, c, & e only ☐

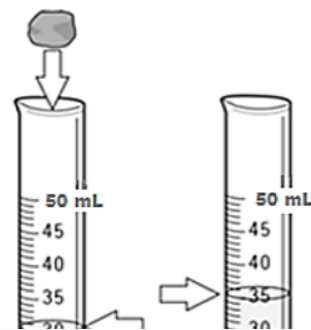
c.

b & d only ☐

d.

c & d only ☐

Using the following diagram, what is the density of the rock if its mass is 9.16 g?



a.

9.16 g/mL

☐

b.

1.56 g/mL

☐

c.

0.83 g/mL

☐

d.

0.46 g/mL

☐

Which of the following is an example of a homogenous mixture?

a.

Gasoline

☐

b.

Blood

☐

c.

Dirt

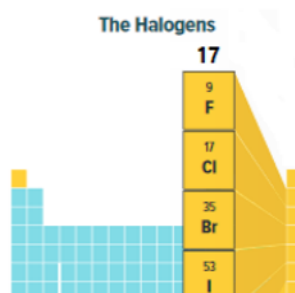
☐

d.

Milk

☐

Which of the following is **correct** regarding the halogens group?



- a. Found in nature as pure elements only ☐
- b. Possess five electrons in their outer energy level ☐
- c. Stable because their outer energy levels are full ☐
- d. Gains an electron from a metal, an ionic compound called salt is formed ☐

Which of the following subatomic particle is not made from smaller particles?

a.

Nucleus

☐

b.

Proton

☐

c.

Electron

☐

d.

Neutron

☐

Which of the following is **NOT** a physical property?

- a. Magnetism ☐
- b. Size ☐
- c. Flammability ☐
- d. Viscosity ☐

Which one of the following is **NOT** considered a base unit in the SI system?

a.

Intensity of light (cd)

☐

b.

Electric current (A)

☐

c.

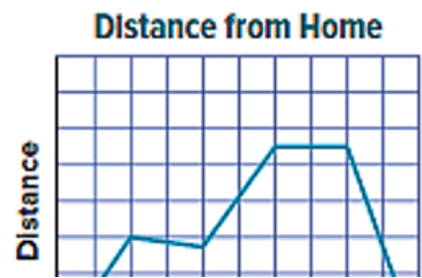
Temperature (K)

☐

d.

Volume (cm^3)☐

A girl takes her dog for a 10- minute walk, as shown in the following graph, wha



- a.

The dependent variable

☐
- b.

The independent variable

☐
- c.

The control

☐
- d.

The constant

☐