CHEMISTRY WORKSHEET: MATTER #1

READ THE FOLLOWING SENTENCES AND CIRCLE THE RIGHT OPTION OR WRITE THE CORRECT WORD.

1. A mixture (is/is not) a chemical combining of substances.
2. In a compound the (atoms/molecules) are (chemically/physically) combined so that the elements that make up the compound (retain/lose) their identities and (do/do not) take on a new set of properties.
3. The smallest identifiable unit of a compound is a(n) _____, which is made up of two or more _____ which are chemically bonded.
4. True or False: A mixture is always made up of a combination of elements.
5. In a mixture, the substances (lose/retain) their identities.
6. In a mixture the substances involved (can/cannot) be separated by a simple physical process.
7. In a compound the elements involved (can/cannot) be separated by a simple physical process because the elements are (physically combined/chemically bonded).
8. True or False: An element can be broken down into a simpler substance.
9. The smallest identifiable unit of an element is a(n) _____.
10. From the following list of substances, circle the ones that are elements:

    Silver, carbon dioxide, wood, alcohol, water, hydrogen, carbon, nitrogen, oxygen, gold, sugar, salt, air, sulfur, magnesium, nickel.

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Classify the following as pure substances (PS) or as mixtures (M):

Air
Gasoline
Grain
Water
Alcohol
Sugar
Gold
Mercury
Oxygen

Classify the following as heterogeneous (HET) or as homogeneous (HOM) next to the words:

sand & salt mixture	hydrogen	iron
salt water	unfiltered air	iron with rust
pure water	an apple	nitric acid
tossed salad	granite	wood

Classify the following as an element, a compound, a solution, or a heterogeneous mixture:

aluminum	raisin bread
carbon dioxide	water
sugar and water	sulfur
sulfuric acid	mercury
an orange	water & instant coffee
a pencil	carbon particles & sugar

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nitrogen

air

gasoline

ELEMENTS, COMPOUNDS AND MIXTURES: Classify each of the pictures below by placing the correct label in the blanks below:

A= Element

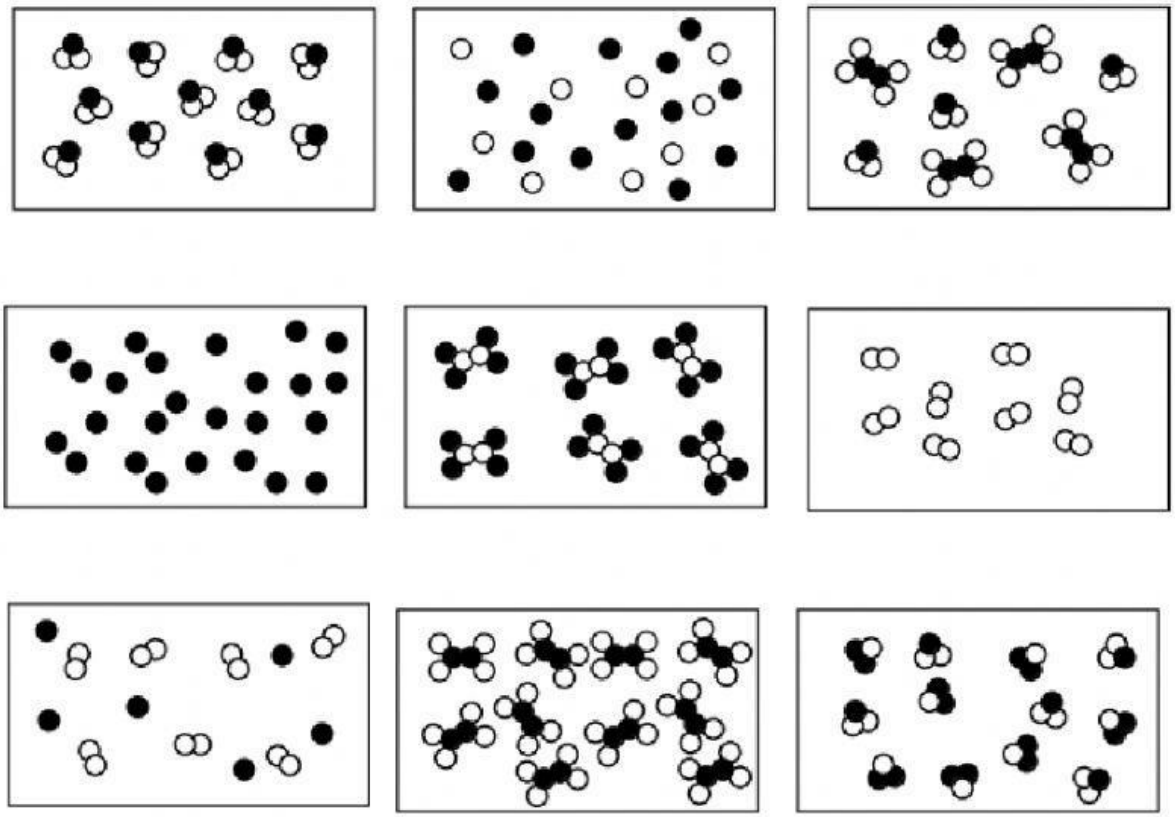
B= Compound

C= Mixture of elements

D= Mixture of compounds

E= Mixture of elements and compounds

NOTE: Each circle represents an atom and each different color represents a different kind of atom. If two atoms are touching then they are bonded together.



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Physical and Chemical Changes

Place a check in the appropriate column:

Change	Physical Change	Chemical Change
Salt dissolves in water.		
Hydrochloric acid reacts with magnesium to produce hydrogen gas.		
A piece of copper is cut in half.		
A sugar cube is ground up.		
Water is heated and changed to steam.		
Iron rusts.		
Ethyl alcohol evaporates.		
Ice melts.		
Milk sours (goes bad).		
Sugar dissolves in water.		
Pancakes cook on a griddle.		
Grass grows on a lawn.		
A tire is inflated with air.		
Food is digested in the stomach.		
Water is absorbed by a paper towel.		
Ethyl alcohol boils at 79°C.		
Paper burns.		
Water freezes at 0°C.		
Fireworks explode.		
Clouds form in the sky.		

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