

Elements, Compounds & Mixtures Worksheet

Part 1: Read the following information on elements, compounds and mixtures. Fill in the blanks where necessary.

Elements:

- A pure substance containing only one kind of _____.
- An element is always uniform all the way through (homogeneous).
- An element _____ be separated into simpler materials (except during nuclear reactions).
- Over 100 existing elements are listed and classified on the _____.

Compounds:

- A substance containing two or more different kinds of atoms is a(n) _____.
- The atoms are chemically combined in some way.
- Any two atoms combined together form a(n) _____.
- A compound is always homogeneous (uniform).
- Compounds _____ be separated by physical means. Separating a compound requires a chemical reaction.
- The properties of a compound are almost always different than the properties of the elements it contains.

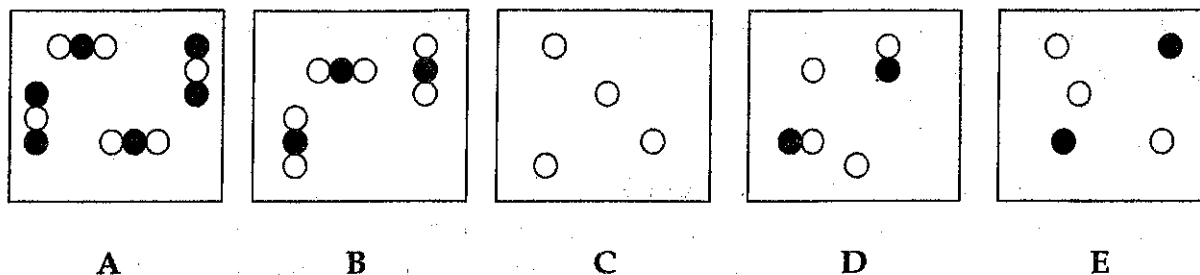
Mixtures:

- Two or more _____ or _____ NOT chemically combined.
- No reaction between substances.
- Mixtures can be uniform (called _____).
- Mixtures can also be non-uniform (called _____).
- Mixtures can be separated into their components by chemical or physical means.
- The properties of a mixture are similar to the properties of its components.

Part 2: Classify each of the following as elements (E), compounds (C) or Mixtures (M).
Write the letter X if it is none of these.

___ Diamond (C)	___ Sugar (C ₆ H ₁₂ O ₆)	___ Milk	___ Iron (Fe)
___ Air	___ Sulfuric Acid (H ₂ SO ₄)	___ Gasoline	___ Electricity
___ Krypton (K)	___ Bismuth (Bi)	___ Uranium (U)	___ Popcorn
___ Water (H ₂ O)	___ Alcohol (CH ₃ OH)	___ Pail of Garbage	___ A dog
___ Ammonia (NH ₃)	___ Salt (NaCl)	___ Energy	___ Gold (Au)
___ Wood	___ Bronze	___ Ink	___ Pizza
___ Dry Ice (CO ₂)	___ Baking Soda (NaHCO ₃)	___ Titanium (Ti)	___ Concrete

Part 3: Match each diagram with its correct description. Diagrams will be used once.



- ___ 1. Element - only one type of atom present.
- ___ 2. Mixture of two elements - two types of uncombined atoms present.
- ___ 3. Compound - only one type of compound present.
- ___ 4. Mixture of two compounds - two types of compounds present.
- ___ 5. Mixture of a compound and an element.

Part 4: Column A lists a substance. In Column B, list whether the substance is an element (E), a compound (C), a Heterogeneous Mixture (HeM), or a Homogenous Mixture (HoM). In Column C, list TWO physical properties of the substance.

Column A	Column B	Column C
1. Sausage		
2. Steam		
3. Salt Water		
4. Pencil lead (Pb)		
5. Dirt		
6. Pepsi		
7. Silver (Ag)		
8. Toothpaste (Na_2HPO_4)		
9. A burrito		
10. Italian Dressing		
11. Chicken Soup		
12. Lemonade		