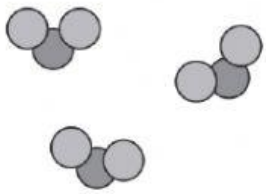
Name: _____ Block: _____ Date: _____

Elements, Compounds, and Mixtures

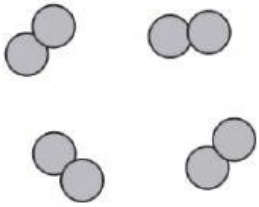
Identify each diagram as either an element, compound, or mixture.

Carbon dioxide



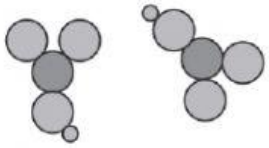
1. _____

oxygen



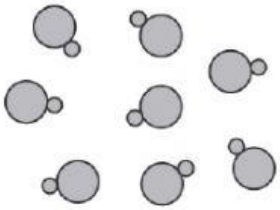
2. _____

nitric acid



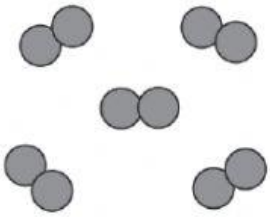
3. _____

hydrochioric acid



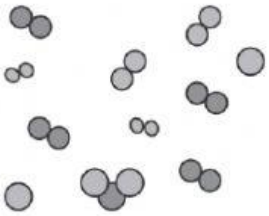
4. _____

nitrogen



5. _____

air



6. _____

State whether each substance below is an element, compound, or mixture.

Substance	Chemical Formula	Element, Compound, Mixture
Oxygen	O_2	
Sulfuric Acid	H_2SO_4	
Salt Water	$NaCl + H_2O$	
Magnesium Oxide	MgO	
Gun Powder	$S + KnO_3 + C$	
Nitrogen	N_2	

Complete the following sentences using the word bank.

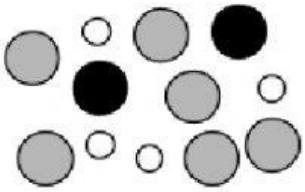
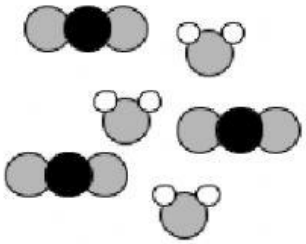
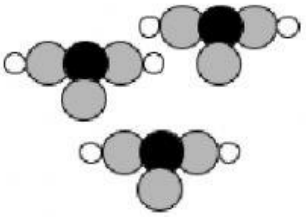
two or more	two or more	only one	not chemically joined	chemically joined

1. An *element* is made up of _____ type of atom.
2. A *compound* is made up of _____ different atoms, _____ together.
3. A *mixture* is made up of _____ different atoms, _____ together.

State whether each statement is true or false.

1. _____ Elements can only exist as atoms.
2. _____ Compounds can only exist as molecules.
3. _____ Mixtures can include atoms and molecules.
4. _____ Compounds can be broken down into new substances physically.
5. _____ Elements cannot be broken down into new substances.
6. _____ Mixtures can be separated into their component substances by chemical reactions.

Students were asked to draw a diagram of soda water, a mixture of carbon dioxide and water. Below are the answers from three students.

		
Phillip	Caroline	Roderick

For each student, state whether or not their answer was correct. If their answer was incorrect, what was their error?

Phillip: _____

Caroline: _____

Roderick: _____