

Name: \_\_\_\_\_

Hour: \_\_\_\_\_ Date: \_\_\_\_\_

**Chemistry: Classifying Matter**

Classify each of the materials below. In the center column, state whether the material is a **pure substance** or a **mixture**. If the material is a pure substance, further classify it as either an **element** or **compound** in the right column. Similarly, if the material is a mixture, further classify it as **homogeneous** or **heterogeneous** in the right column. Write the entire word in each space to earn full credit.

<b>Material</b>	<b>Pure Substance or Mixture</b>	<b>→ Element, Compound, Homogeneous, Heterogeneous</b>
concrete		
sugar + pure water ( $C_{12}H_{22}O_{11} + H_2O$ )		
iron filings (Fe)		
limestone ( $CaCO_3$ )		
orange juice (w/pulp)		
Pacific Ocean		
air inside a balloon		
aluminum (Al)		
magnesium (Mg)		
acetylene ( $C_2H_2$ )		
tap water in a glass		
soil		
pure water ( $H_2O$ )		
chromium (Cr)		
Chex mix		
salt + pure water ( $NaCl + H_2O$ )		
benzene ( $C_6H_6$ )		
muddy water		
brass (Cu mixed with Zn)		
baking soda ( $NaHCO_3$ )		

## Elements, Compounds, and Mixtures

Classify each of the pictures below by placing the correct label in the blanks below.

A = Element

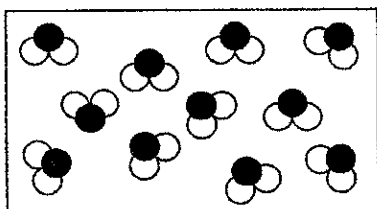
D = Mixture of Compounds

B = Compound

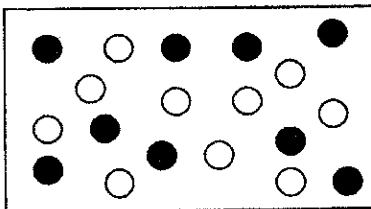
E = Mixture of Elements and Compounds

C = Mixture of Elements

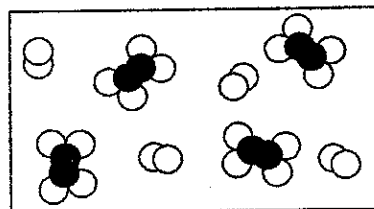
Each circle represents an atom and each different color represents a different kind of atom. If two atoms are touching then they are bonded together.



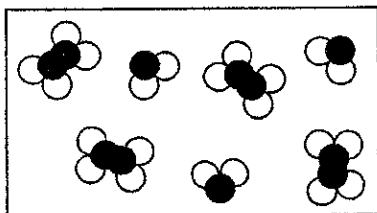
1. \_\_\_\_\_



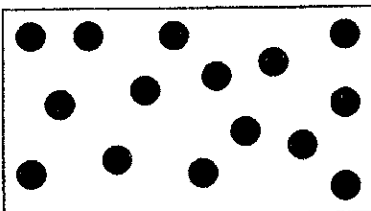
2. \_\_\_\_\_



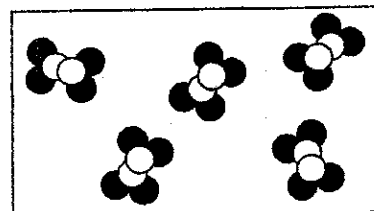
3. \_\_\_\_\_



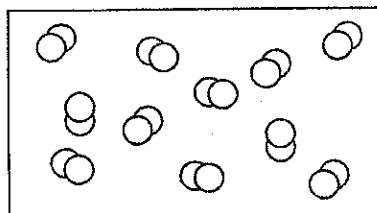
4. \_\_\_\_\_



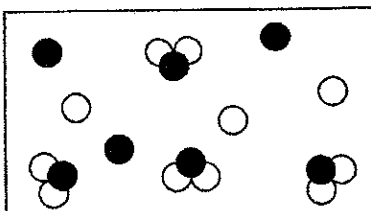
5. \_\_\_\_\_



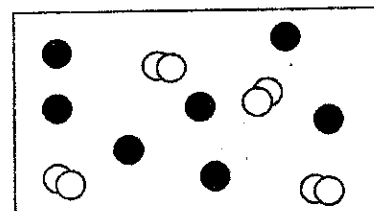
6. \_\_\_\_\_



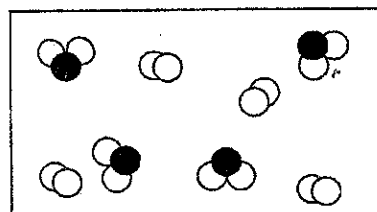
7. \_\_\_\_\_



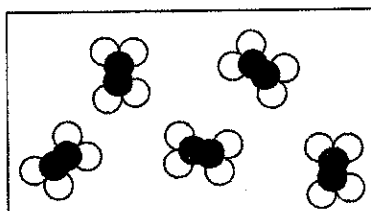
8. \_\_\_\_\_



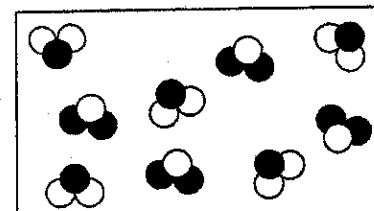
9. \_\_\_\_\_



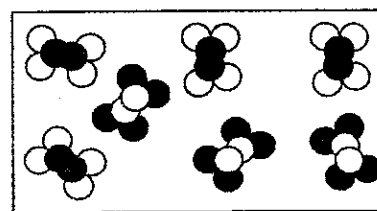
10. \_\_\_\_\_



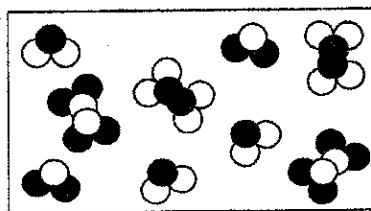
11. \_\_\_\_\_



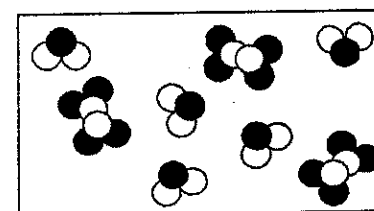
12. \_\_\_\_\_



13. \_\_\_\_\_



14. \_\_\_\_\_



15. \_\_\_\_\_