

Name: _____

Date: _____

- [5 pt] 1. Complete the following table:
 Shape and Volume Columns: (D)efinite or (I)ndefinite.
 Compressibility: (H)igh, (L)ow, and (N)one.
 Picture: Sketch a picture. Attractive Forces (S)trong, (W)eak, (N)one

State	Shape	Volume	Compressibility	Picture	Attractive Forces
Solid					
Liquid					
Gas					

- [5 pt] 2. Do the following statements best describe a (S)olid, (L)iquid, or (G)as?
- | | |
|--|------------|
| (a) The atoms are very close to each other. | 2(a) _____ |
| (b) The atoms are very far apart from each other. | 2(b) _____ |
| (c) Easily compressible. | 2(c) _____ |
| (d) Fills any container fully. | 2(d) _____ |
| (e) The attractive force holding the atoms together is weak. | 2(e) _____ |

- [2 pt] 3. What **TWO** properties can be used to distinguish between a pure substance and a mixture?

- [2 pt] 4. What **TWO** properties can be used to distinguish between an element and a compound?

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- [5 pt] 5. Identify the following as either a pure (S)ubstance or a (M)ixture. Explain.
- (a) A glass of Kool-Aid 5(a) _____
- (b) Potassium Iodide (KI) 5(b) _____
- (c) N₂ 5(c) _____
- (d) Smog 5(d) _____
- (e) Milk 5(e) _____
- [2 pt] 6. What property can be used to distinguish between a homogeneous mixture and a heterogeneous mixture?
- [5 pt] 7. Identify the following mixtures as either homogeneous (S) or heterogeneous (D). Explain your answer based on the physical observations of the mixture.
- (a) A not so perfect cup of hot chocolate. 7(a) _____
- (b) Driving down a road and encountering a bank of fog. 7(b) _____
- (c) Adding a tablespoon of sugar to a glass of water and stirring. 7(c) _____
- (d) Chocolate chip cookies 7(d) _____
- (e) Brass (Mixture of Cu and Zn) 7(e) _____

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[2 pt] 8. What is the (2) main difference between physical and chemical properties (or changes)?

[2 pt] 9. List 7 physical properties.

[5 pt] 10. Identify the following properties as either (P)hysical or (C)hemical.

(a) A block of styrofoam floats on water 10(a) _____

(b) Sugar when heated above its melting point becomes carmel 10(b) _____

(c) Iron dissolves in hydrochloric acid and produces hydrogen gas 10(c) _____

(d) Lithium metal is a shiny metal that when exposed to air becomes dull colored and can't be returned to its original shiny condition 10(d) _____

(e) An iron nail is attracted to a magnet 10(e) _____

[10 pt] 11. Classify the following as being primarily a (P)hysical or primarily a (C)hemical change:

(a) formation of a snowflake from liquid water 11(a) _____

(b) melting ice cream 11(b) _____

(c) boiling water 11(c) _____

(d) churning cream to make butter 11(d) _____

(e) boiling an egg 11(e) _____

(f) souring milk 11(f) _____

(g) melting an ice cube 11(g) _____

(h) breaking a thermometer 11(h) _____

(i) a nail rusting 11(i) _____

(j) gasoline burning 11(j) _____

