

Practice 2.1

Name _____

1. **Classify** the following as a homogeneous, *O*, or a heterogeneous, *E*, mixture.

____ **a.** a pail of sand and water

____ **d.** a banana split

____ **b.** air

____ **e.** chocolate syrup

____ **c.** human blood

____ **f.** sea water

2. **Compare and contrast** atoms and molecules.

3. **Explain** the difference between a pure substance and a homogeneous mixture.

4. **Classify** each of the following as an element or a compound.

_____ **a.** benzene, C₆H₆

_____ **d.** titanium, Ti

_____ **b.** aluminum, Al

_____ **e.** acetylene, C₂H₂

_____ **c.** aspirin, C₉H₈O₄

_____ **f.** zinc, Zn

5. **Explain** why elements and compounds are pure substances.

6. **Determine** which of the following are pure substances and which are mixtures.

_____ **a.** salt water

_____ **d.** ammonia, NH₃

_____ **b.** isopropyl alcohol, C₃H₈O

_____ **e.** an egg yolk

_____ **c.** mercury, Hg

_____ **f.** honey

7. **Determine** the number and kinds of atoms in the following molecules.

a. Water, H₂O _____

b. acetylene, C₂H₂ _____

c. isopropyl alcohol, C₃H₈O _____

d. aspirin, C₉H₈O₄ _____