

Concept Review

Section: What Is Matter?

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

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|-----------------------------------|--------------------------|
| _____ a. a pail of sand and water | _____ d. 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.

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|-------|-------------------------|
| _____ | a. benzene, C_6H_6 |
| _____ | b. aluminum, Al |
| _____ | c. aspirin, $C_9H_8O_4$ |
| _____ | d. titanium, Ti |
| _____ | e. acetylene, C_2H_2 |
| _____ | 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 |
| _____ | b. isopropyl alcohol, C_3H_8O |
| _____ | c. mercury, Hg |
| _____ | d. ammonia, NH_3 |
| _____ | e. an egg yolk |
| _____ | f. honey |