

CHEM 120 Homework Chapter 1

1) Which the following statement about scientific method is false

- a) Scientific method is a procedure followed by scientist around the world.
- b) It usually starts with an experiment, looking for patterns in the data, hypotheses, theory then further experiments.
- c) Scientific Theory will never become obsolete.
- d) Patterns in observations are summarized as a scientific law.
- e) Further experiments confirm and sometimes modify or replace a theory.

2. An example of a chemical compound is,

- a) air b) brass (an alloy) c) granite (a rock) d) table salt

3. An example of a physical change

- a) Baking a cake b) Burning fire wood c) Electrolysis of water d) Sublimation of dry ice.

4. Samples of seawater obtained from various locations vary in the weight percentage of various elements present in the sample. This suggests that seawater is

- a. mixture. b. a compound. c. an element. d. a pure substance.

5. Which name/symbol combination is wrong?

- a. Tungsten/W b. Fluorine/F c. Silicon/Si d. Selenium/Sn e. Silver/Ag

6. Compounds are different from mixtures because compounds

- a. are composed of two or more substances.
- b. have compositions that may vary from substance to substance.
- c. always have the same set of physical properties.
- d. can be separated by physical means into simpler substances.

7. Which of the following is a chemical property of iron?

- a. occurs in an abundance of 4.7% in the earth's crust
- b. melts at 1535 °C
- c. attracted to a magnet
- d. rusts when exposed to moist air

8. Convert -78 °C to °F.

- a. -108 °F b. -61 °F c. -195 °F d. -351 °F

9. The correct answer to report for

$$\frac{2.481 \times 12.74}{2.69} + 0.27 \text{ is}$$

- a. 12.0202 b. 12.020 c. 12.02 d. 12.0 e. 12

10. How many cubic meters equal one cubic millimeter?

- a. 10^9 b. 10^6 c. 10^{-2} d. 10^{-9}