Name _____ Date _____ Class _____

1 INTRODUCTION TO CHEMISTRY

Practice Problems

In your notebook, solve the following problems.

SECTION 1.1 CHEMISTRY

1. Match the project to the appropriate field of chemistry (inorganic chemistry, organic chemistry, biochemistry, analytical chemistry, or physical chemistry).
   a. Determine the composition of a moon rock sample.
   b. Do research on making a new medicine to treat high blood pressure.
   c. Investigate ways to regulate the rate of gasoline burning in an automobile engine.
   d. Develop a plastic that can be decomposed by bacteria.
   e. Improve the method for extracting iron from iron ore.
2. Classify the following examples as examples of pure chemistry or applied chemistry.
   a. developing a shampoo to be used with dry or damaged hair
   b. determining the conditions required for materials to burn
   c. figuring out the general structure of materials such as cotton and silk
   d. designing a large-scale method for producing nylon
   e. explaining why water expands when it freezes

SECTION 1.2 CHEMISTRY FAR AND WIDE

1. Identify three areas of energy research that scientists are working on today.
2. The following statements are all concerned with the work chemists do. Write T for each *true* statement and F for each *false* statement.
   a. Chemists design materials to meet specific needs.
   b. Oil from the soybean plant is used to make biodiesel.
   c. As the world's population increases, the amount of land available to grow food increases.
   d. Many drugs are effective because they interact in a specific way with chemicals in cells.
   e. The trend in crop protection is toward chemicals that are less specific.
   f. The use of lead paint in houses was banned in 1978.
   g. Chemists are doing research to improve batteries.
   h. To study the universe, chemists gather data from afar and analyze matter that is brought back to Earth.
   i. Chemists have developed a plastic "skin" that can heal itself when it cracks to help patients with burns.

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