

Che 111: Chapter 2 Practice Problems

1. According to the model presented in this chapter, all matter is composed of tiny

2. If the pistons and cylinders in your car engine get too hot, the pistons can get stuck in the cylinders, causing major damage to the engine. Why does this happen?
3. Write the chemical symbols that represent the following elements.
 - a. Hydrogen
 - b. Mercury
4. Write the name of the group or family to which each of the following belongs.
 - a. Iodine
 - b. Xenon
5. Write the name and symbol for the elements that fit the following descriptions:
 - a. the noble gas in the fifth period
 - b. the alkaline earth metal in the sixth period
6. Identify each of the following as a cation or an anion, and determine the charge on each.
 - a. An iodine ion with 53 protons and 54 electrons
 - b. An iron ion with 26 protons and 23 electrons
7. Write definitions of the terms atomic number and mass number. Which of these can vary without changing the element? Why? Which of these cannot vary without changing the element? Why?
8. Write the name and symbol for the elements that fit the following descriptions.
 - a. 78 protons in the nucleus of each atom.
 - b. 42 electrons in each uncharged atom.
 - c. 80 electrons in each +3 cation.
 - d. 18 electrons in each -2 anion.