

## 7.2 Review Questions

1. What property of an atom determines what it is? In other words, what makes carbon different than boron or nitrogen?
2. How many protons would it take to make a 70 Kg person?
3. If each proton from #2 had an electron around it, by how would this change the person's mass?
4. The mass of a proton is actually  $1.673 \times 10^{-27}$  Kg while a neutron's mass is  $1.675 \times 10^{-27}$  Kg. Does it make sense to call neutrons and protons essentially the same mass? Why or why not?
5. Exactly how many times more massive is a proton than an electron? (Don't just say 2000X. Find their masses in the reading and do the math.)
6. What is the charge on a neutron?
7. The volume of one hydrogen atom is  $1.859 \times 10^{-20}$  mL. If the volume of the period at the end of a sentence is 0.00039 mL, how many atoms fit in the period?
8. What is the density ( $D=m/V$ ) of one hydrogen atom? (The information you need is given in the other problems. This is a longer problem than you might think.)
9. If 12.0 grams of carbon contains  $6.02 \times 10^{23}$  atoms, how many atoms would a Kilogram of carbon have?