Chem Talk

Read the Chem Talk beginning on **page 138** of the Active Chemistry textbook. Answer the following questions.

1) Explain the meaning of density?

2) Explain the difference between feathers and lead, using the concept of density.

3) Why is balsa wood instead of birch wood used in the construction of model airplanes? [Use the approximate densities table]

4) What determines if an object will sink or float in a given material?

5) How is the story of Archimedes related to density?

6) When adding and subtracting numbers, how many decimal places should the answer have?

7) Add/subtract the following numbers:

12.3	11.30	111
10.000	1021.000	0.200
+ 14.2	− 14.21	+ 0.532

8) When multiplying and dividing numbers, how many significant figures should the answer have?

9) Multiply/divide the following numbers:

$$36 * 41.234562 = \qquad \frac{43.221}{10.000} = \qquad 1.000 * 42.111 =$$

10) In an investigation, the volume of a material is measured as 80.0 cm³ and its mass is measured as 253 g. Which calculation of density correctly uses the precision rules: 3.1625 g/cm³, 3.163 g/cm³, 3.16 g/cm³, 3.2 g/cm³, or 3 g/cm³? Why?