**Chemical Engineering 374**

**Reading Questions 10—Chapter 7.1-7.3**

**Name** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. In an analysis of a problem, two additive terms are found to have different dimensions. What does this indicate?
2. What are three typical scaling parameters in fluid mechanics?
3. What are two advantages of nondimensionalizing an equation?
4. How are each of the the following defined: Geometric similiarity, Kinematic Similarity, Dynamic Similarity?
5. Examples 7.5 and 7.6 deal with model cars being studied to learn about the requirements of “similar” full-sized prototype cars. To determine the needed characteristics of the prototype, what dimensionless group was assumed to be equal for the model and prototype systems?