**Chemical Engineering 374**

**Reading Questions 10—Chapter 7.4-7.5**

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

1. In the pi method, if one has five parameters and two dimensions, how many dimensionless groups are expected?
2. In the pi method, if one has five parameters and two dimensions, how many repeating variables are chosen in order to find the pi’s?
3. What are two common restrictions on the repeating variables in the pi method?
4. True or false: the pi’s need to be independent?
5. True or false: the pi’s need to be unique?
6. In considering flows with a free surface, if one cannot find an appropriate fluid (that is, you can’t match all the parameters), what should one do?