

**NAME:** \_\_\_\_\_

**Chapter 7 review**

**To discuss in class on Tuesday, October 28, 2008**

**Math 111 Sec FC01**

The Organization of American States (OAS) has 35 member nations, 13 of them island nations and 22 of them continental. Of the island nations, 2 of them have Spanish as an official language, and 10 of them have English as an official language. Of the continental nations, 16 have Spanish as an official language, and 4 of them have English as an official language.

1. Draw a tree diagram or a probability table which represents this data.
2. A student at a model OAS session selects a nation at random to represent.
  - (a) What is the probability that the nation she selects:
    - is an island nation?
    - has English as an official language?
    - has Spanish as an official language?
  - (b) Suppose she selects a nation with Spanish as an official language. What is the probability:
    - that she selected an island nation?
    - that she selected a continental nation?
3. Let  $E$  be the event that she chooses an island nation, and  $F$  be the event that she chooses a nation with English as an official language. Are the events  $E$  and  $F$  independent?