

NAME: _____

Quiz 2 [10 pts]. September 16, 2008

Math 111 Sec FC01

For questions 1 and 2: At a certain restaurant, the limited prix fixe menu allows the customer to choose from the options for each of the four courses. The menu is below:

<i>Soup:</i>	Asparagus puree Bisque of lobster
<i>Salad:</i>	Cæsar Date and nut
<i>Entree:</i>	Escargot on petit filet mignon Fried chicken
<i>Dessert:</i>	German chocolate cake

1. How many different possible meals could the customer select for his meal? Show work or explain your answer. [3 points]

2. *On the back of this sheet*, draw a tree diagram to represent each of the possible meals that the customer could make. Feel free to use appropriate abbreviations. [3 points]
3. A standard New York state license plate is designated by three letters and four numerical digits. How many license plates are possible using this method? [2 points]

4. Suppose that the letter O is not allowed to be used in the license plates. How many are possible? [2 points]

Bonus. Suppose the letter O is allowed, but no license plate is permitted to have the same number repeated four times in a row. How many license plates are possible now? (Hint: First, figure out how many license plates there are with the same digit repeating four times.) [2 points]