Econ 4808 Spring 2004, Quiz 3

In class quiz, groups of two or three, I prefer groups of three. 10 points total.

1. (5 points). Consider the following two statements. (1) If you are not a fool, you are not an economist. (2) All economists are fools. What is the relationship between these two statements. Demonstrate your answer with a Venn diagram.

   answer: The two statements are equivalent. One is of the form \( A \Rightarrow B \); the other is \( \neg B \Rightarrow \neg A \), where \( A \equiv ( \text{being an economist} ) \) and \( B \equiv ( \text{being a fool} ) \). Picture the set of all people. Then the subset that are fools. Economists are a subset of the fools. This is the "knew him loved him" question on the first set of problems. It is also part of the answer to the last quiz. This issue reminds me of the Coolridge poem. Sir, I admit your general rule that every poet is a fool, but you, yourself, prove to show it that every fool is not a poet."

2. (5 points each part). Assume in Bunga Bunga there is blue money and green money. In explanation everything has a blue price and a green price and when you an item you have pay both the blue price and the green price. Assume you have 100 blue dollars and 25 green dollars. Further assume that the price of \( A \) is 10 in blue money and the price of \( B \) is 10 in blue money. Further assume, the price of \( A \) is 3.3333333 in green money and the price of \( B \) is 1.6666666 in green money. Also assume that more is always preferred to less. Is it possible that you would choose to consume 7 units of commodity \( B \)? Explain. Is it possible you would consume 9 units of \( A \)? Explain.

   answer: The first constraint is \( 100 = 10A + 10B \), Solution is: \( B = 10 - A \). The second constraint is \( 25 = 3.3333333333333A + 1.66666666B \), Solution is: \( 15.0 - 2.0A \). Graphing these, the budget set is the intersection of the two sets. The answers are yes and no. Yes because \( B = 7 \) and \( A = 3 \) is on the boundary of the intersection of the two sets, so the individual can afford a bundle with 7 units of \( B \) in it, and there is a bundle with \( B = 7 \) that is on the boundary of the budget constraint. We do not know which bundle he will choose but we do not know that he will choose a bundle on the boundary of the budget set. So, the bundle 3,7 is one possibility. No to the second question because \( A = 9 \) violates the green money budget constraint.
Some of you were confused about what the assumption 'more is preferred to less' means. It means if bundle $A$ has more of some commodities than does bundle $B$ but not less of any other commodities, then bundle $A$ is preferred to bundle $B$. This is the assumption that guarantees that the individual will operate on the boundary of their budget set rather than in the interior of their budget set. Saying it a different way, "more is preferred to less" means an individual will always prefer more of a commodity if he can get it without giving up anything. Said another way, it is the "commodities are goods" assumption.