Economics 316

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Problems for Tutorial 2

1. Consider a variant of the example of Bertrand's duopoly game considered in class in which each firm is restricted to choose a price that is an integral number of cents. Take the monetary unit to be a cent, and assume that c is an integer and $\alpha > c + 1$.

   (a) Is (c, c) a Nash equilibrium of this game?

   (b) Does the game have any other Nash equilibrium?

2. Consider a generalization of the example of Bertrand's model considered in class in which there are n firms, with $n \geq 3$. (Maintain the assumptions made in class on the cost and demand functions.) Find the set of Nash equilibria of the resulting strategic game.

3. Find the Nash equilibrium of Cournot's game when there are two firms, the inverse demand function is the same as the one in the example considered class, and the cost function of each firm i is $C_i(q_i) = q_i^2$.