

Some sample problems for 510.

1. Assume that a producer's cost function is now $C(t) = 10t$. The demand function $t = 100 - p$, where p is the price of tofu.

(a) What is the price for tofu if only one firm produces it?

(b) Suppose that two firms produce tofu and they compete by simultaneously choosing quantities of tofu to put on the market. The market price is determined so that the market clears. Find the market equilibrium price now.

(c) Graph the best response functions, show and explain the Nash equilibrium.

(d) How much is a firm willing to bribe the government so that the government does not give a permit to the other firm?

2. Motta exercise 2.4.

3. Motta 2.8

4. Motta 2.18

5. Take the Hotelling model from class where both firms have constant marginal cost of c per unit. Firm 0 is located at 0 and Firm 1 is located at 1. Consumers are uniformly distributed between 0 and 1. The difference between this model and the one we did in class is that consumer transportation costs are t if they buy from Firm 0 and r if they buy from Firm 1, where $t > r$. Assume that all consumers will buy a good and, in equilibrium, both firms get a positive number of consumers. Find the subgame perfect equilibrium prices and market shares.

6. Motta 3.5