Homework 1

1. Consider the platform model we studied in the lecture. Sellers are of two types, and . Buyers are also of two types, and . Each type consists of half of the population in each group. The modification in this exercise is that now every pair of match generates positive surplus, i.e., . We still assume that there exists a decentralized market where agents randomly match and the surplus is evenly split between a buyer and a seller.
2. Write down all agents’ payoffs in the decentralized market if the platform is absent.
3. Write down the total welfare in the decentralized market if the platform is absent.
4. Now we introduce a profit-maximizing platform who acts as a dealer between buyers and sellers. What prices can the platform charge to segment the market so that only the more efficient types join the platform.
5. Verify that all types of agents have no incentive to deviate.
6. Does the platform make positive profit?
7. Who are better off and who are worse off after introducing the platform?
8. Is the total welfare enhanced after introducing the platform? Explain why.
9. Derive the demand curve with network effect.

3. Read the attached article about Ebay and address the following questions:

a) Comment on entrant’s idea that lowering or eliminating listing fees is a good way to attract more sellers.

b) Explain the nature of the network externalities in this market, both positive and negative.

c) In light of your answer to part b), comment on the strategy of entrants targeting specific categories of goods, as opposed to tackling Ebay head-on across all categories.