

1a. [Everyone who was able to understand that this question was 3 identical mini mf-retailer problems and knew how to add demands faced no problems in this question]. Setting up own operation: A quick explanation to take this out of the question is that the sunk cost exceeds the size of the total market. To be precise however, for really high  $a, b$ , it is possible for the own operation to be profitable. (Some people indeed pointed this out).

Payoff for A and B from joint negotiation:  $\Pi_J = 0.5(a + b)Q - 0.5Q^2 \Rightarrow Q = (a + b)/2 \Rightarrow \Pi_J = (a + b)^2/8$ .

Share for A:  $\Pi_{JA} = a(a + b)^2/8(a + b) = (a^2 + ab)/8$  and share for B:  $\Pi_{JB} = (b^2 + ab)/8$ .

Payoff for A under separate negotiation:  $\Pi_A = a^2/8$  and for B  $\Pi_B = b^2/8$ .

The tiers want to pool.

1b. The only complication here is even though the tiers will not pool, the platform will (higher profit as seen before – same as tiers). The profit of the platform will be:  $(a + b)^2/4 - (a^2 + b^2)/8 = (a^2 + b^2)/8 + ab/2$ .

1c. In this task the bargaining power of A and B is assumed to be equal. In reality bigger teams will have more negotiating power than small teams so they can exercise monopsony power to the platform(s) while the small teams cannot. This allows big teams to extract higher shares than small teams.

2. The key result of Salop model is that strategic location may allow deterrence even though incumbents are fewer than the market can potentially accommodate and incumbents may enjoy positive profits. If the costs of rebranding or withdrawal were zero, this result would collapse because commitment could not be stand in the model. That is, after every delayed entry, the incumbents' dominant strategy would be to re-scatter around the circle leaving equal space for the late entrant.

3. This is a potential copyright violation because the plaintiff can claim that the use of copyrighted material was extensive, or gave out the plot, or was not used appropriately. If it reaches a court, this can be defended under "fair use". That is, (in nearly every jurisdiction) the law allows the use of a fair amount of copyrighted material for commentary, parody, news, etc. The plaintiff has to prove that the mere fact that those clips were included in this video, replaced the need for someone to watch the original episode. It is important to understand that potential damage to the series from the opinion of the defendant or the way this commentary is expressed is not relevant.

4a. The answer comes directly from slides L21S10, L21S11 and L21S14. The only difference from the slides is that the size of the market  $S$  is given indirectly through the demand function.

4b. We needed the explanation under the equation from slide L21S14.

4c. [This was covered extensively in the lecture and I literally told you that I will ask it in the exam. It is the topic of slide L21S15]. It contradicts the expectation. This happens because we assumed no barriers

for entry. The reason that low concentration markets tend to not compete intensively is the assumption of barriers for entry. Here we do not assume barriers for entry.

5a. It will be preferable to charge only usage fee because usage pricing will be closer to MC than subscription fee leading to a result closer to the first best. [Directly from slide L27S28]

5b. Equation and explanation from L27S28. For each side, the MC will be alleviated by the side price of the other side because the incidence of a transaction will also result in receiving revenue from the other side.

6a. Exactly the same as slides L20S18 and L20S19 but easier, with numbers!

$$\begin{cases} \pi_1 = (1 - p_1 + 0.5p_2)(p_1 - w_1) \rightarrow \max(p_1) \\ \pi_2 = (1 - p_2 + 0.5p_1)(p_2 - w_2) \rightarrow \max(p_2) \\ p_1 = \frac{5 + 4w_1 + w_2}{7.5}; p_2 = \frac{5 + 4w_2 + w_1}{7.5} \end{cases}$$

6b. See slide L20S20.

$$\begin{aligned} \pi_i^M &= (w_i - c_i)q_i + A_i = w_i q_i - (p_i - w_i)q_i = p_i q_i \\ \pi_i^M &= \frac{5 + 4w_i + w_j}{7.5} \left(1 - \frac{5 + 4w_i + w_j}{7.5} + \frac{2.5 + 2w_j + 0.5w_i}{7.5}\right) \rightarrow \max(w_i) \\ w_1 = w_2 &= \frac{1}{11}; \pi_1^M = \pi_2^M = \frac{56}{121} \end{aligned}$$

6c. An intuitive explanation would suffice here. You had to identify that there are two two kinds of competitions. (i) the inter-brand competition that is given to occur in prices (ii) the intra-brand competition for product 2. It would be easier and more likely to assume that (ii) occurs in quantities because the product for both retailers for 2 is homogeneous. Given  $p_1$ , market 2 will yield a Cournot outcome, which will be inferior for mf 2 to the monopoly outcome she had before. Thus, quantity in the second market will be higher resulting into a decreased profit for market 1 as well due to the substitution effect between 1 and 2. Both profits will be lower than before but 2 will be even lower than 1. The result will be to the same direction if intra-brand competition is, however, more intense drop in profits will occur.

7. The trendy cocktail bar because of the network effects. As we said in class, the value of a bar patron for a bar may be above what this patron pays. A bar with more patrons will be more attractive to new patrons, so price for “early” patrons and price for “late” patrons do not have the same effect to the profit of the platform’s profit, even though the demands of those customers are identical. Some people identified the museum as a platform (we gave credit to this as well).

8. The statement is incorrect. The burden of proof is on FAS, not on the company. This is a crucial difference.

9. Here we have 3 cases that look similar but are entirely different from an economic perspective. The guns and the bullets are two independent markets. If the bullets are not specialized or patented or there are some other barriers to entry, an easy producible consumable will become a PC good. The ink-printer case is a PD case. Most inks are printer-specific and in most cases patented. The consoles-games case is network case. Lower price for the console helps to reach the critical mass, so the network will be established and make profits from game sales and royalties.

10. A representative firm solves  $\max_{q_i} (100 - \sum_{j=1}^N q_j) q_i$ , which leads to  $q_i^* = \frac{100-c}{N+1}$  and  $\pi_i^* = \left(\frac{100-c}{N+1}\right)^2$ .

At stage one, when entry decisions are made, we need  $\left(\frac{100-c}{N+1}\right)^2 = F$ , which leads to  $N^* = \frac{100}{\sqrt{F}} - 1$ .

Substituting  $N^*$  in  $q_i^*$  results in  $q_i^{**} = \sqrt{F}$ , and thus  $HHI = \frac{\sqrt{F}}{100-\sqrt{F}}$ .

11. A non-practicing entity that collects a generic patent portfolio with the intention to hold up inventors of future products and settle in court for royalties or damages.