These are small and easy questions.

1. Consider the model in the lecture notes (Sec 2.6.2.1 of Tirole) of reputation under moral hazard in the provision of quality for an experience good by a monopolist. Suppose consumers observe the quality of the good purchased two periods after purchasing it (i.e., quality of good bought in period $t$ is observed only at the beginning of period $t+2$). Discuss the conditions needed for sustaining a high quality reputational equilibrium & speculate on the effect of information lags on provision of quality.

2. Construct an example where monopolist provides lower quality compared to the social optimum.

3. Consider the problem of a monopolist who sells an experience good whose quality is given but is not known to the buyer. Using the two models of signaling discussed in class (with two quality levels), illustrate how a decrease in the difference of unit cost of production of the two qualities affects the possibility of information revelation through signaling.


5. Consider the model of vertical product differentiation discussed in class and illustrate the effect of decrease in consumer heterogeneity on concentration and market power.

6. In the Salop circular city model with free entry, an increase in the transport cost parameter $t$ leads to greater entry i.e., lower market concentration and higher market power. What are the economic implications?

7. Consider the linear city model discussed in the lecture notes with transport cost $td^2$. Suppose that firm 1 is an incumbent firm and firm 2 is a potential entrant. The entrant has to incur a fixed cost $f > 0$ in order to enter. For simplicity, assume both firms have zero unit cost. Suppose that the incumbent first chooses its location. This is observed by the entrant who then chooses its location. Finally, both firms choose prices simultaneously. Determine the (approximate) range of $f$ for which entry is blocked, deterred and accommodated - what are the associated location choices?

(Hint: Note that the game in the third stage is identical to the second stage of the two-stage game discussed in class).

8. For the model of informational differentiation and targeted advertising in a two stage duopoly discussed in class, what are the implications if firms can perfectly price discriminate?