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ECON 101

TA Worksheet, Module 13 (Profit and Pricing)

Name:_____ Date:_____

1. Let's suppose Elon Musk somehow manages to make Twitter "profitable" and earns $200 million in accounting profit. Suppose the $44 billion he used to buy Twitter could have bought the entire NBA. And suppose he would have earned $600 million in accounting profit from the NBA. What is Musk's economic profit from Twitter?

2. Draw a picture of an imperfectly competitive firm in the long run in a market with unrestricted entry. Label everything! (hint: think about profit and the average cost curve).

3. What info do you need to figure out an imperfectly competitive firm's quantity, price, and profit?

4. Assuming unrestricted entry, describe (with words and pictures) how an industry moves to zero economic profits.

5. (Challenge – skip if no time) Consider the taco stands on State Street. Suppose that the taco market on State Street is a perfectly competitive market, where all taco stands are exactly the same (i.e. producing the exact same tacos and having the exact same cost features). The market demand for tacos is given by the demand curve where P is the price per taco and Q is the market quantity of tacos:

$P = 100 - 2Q$

Each taco stand faces a marginal cost curve given by the following equation where q is the quantity of tacos produced by the firm:

$MC = 4q$

and a total cost curve given by:

$TC = 2q^2+8$

a) For each taco stand, what is the fixed cost (FC)? What is the average fixed cost (AFC) curve and the average total cost (ATC) curve?

b) What is the break-even price for each taco stand (when profit = 0)? Hint: it's where ATC=MC. Warning: the quantity will seem really low.

c) In the long run, what would the price for one taco be on State Street? How many taco stands will stay in the market?

d) Assume that the current price for one taco on State Street is $12. How many tacos does each taco stand produce? Suppose that there is no cost in setting up/closing down a taco stand. What will happen to the number of taco stands?

6. What does price elasticity of demand have to do with price discrimination?

7. Describe a time that you paid more or less due to price discrimination (try to avoid the student discount example). Was it 3rd degree (group pricing) or second degree (hurdle) price discrimination?

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ECON 101

TA Worksheet, Module 14 (Game Theory)

1. In the 1960s, when people were dumb, there was a game called "chicken" that went like this: two people drive their cars at each other. Before they crash, the drivers have to choose whether to keep going straight or turn. If both got straight, they crash. But if one goes straight and the other turns, then the one who goes straight is super cool and the other player sucks. If they both turn then it's just kinda lame.

   a. Here is the payoff matrix. What is/are the equilibria to this game? (assume it's better to lose than crash and better to tie than lose.)

	Player 2 Straight	Player 2 Turn
Player 1 Straight	Crash, Crash	1 wins, 2 loses
Player 1 Turn	1 loses, 2 wins	Tie, tie

   b. What kind of game is this?

   c. Suppose both player played the maximin strategy in the chicken game. What would be the result?

2. This game has no story, it's just a game. What's the Nash Equilibrium of this game? (the first number is player 1's payoff, the second number is player 2's payoff.)

	Player 2 Left	Player 2 Right
Player 1 Top	300, 200	100, 300
Player 1 Bottom	200, 100	200, 200

3. If these firms could collude (through a repeated game), what choices would they make to maximize their joint profits? (they are choosing the quality of their product)

	Firm 2 chooses high quality	Firm 2 chooses low quality
Firm 1 chooses high quality	Firm 1 profits = $2 million, Firm 2 profits = $2 million	Firm 1 profits = $5 million, Firm 2 profits = $1 million
Firm 1 chooses low quality	Firm 1 profits = $1 million, Firm 2 profits = $5 million	Firm 1 profits = $4 million, Firm 2 profits = $4 million

4. In a repeated game, what's the difference between the grim trigger strategy and the tit-for-tat strategy?