

Discussion Section 5

Perfect Competition

- Many sellers (many firms)
- Many buyers
- Identical products
- No barriers to entry
- Sellers and buyers well informed about prices

1. At present output levels, a perfectly competitive firm is producing 2000 units of output, selling for \$1 each. Fixed costs are \$2000, as are total variable costs. If marginal cost is \$.50, then in order to profit maximize, this firm

 - a) shut down immediately
 - b) reduce output, but stay in business in the short run
 - c) increase output
 - d) continue to produce 2000 units in the short run

Profit Maximization

- Remember to profit maximize, the rule is

$$MR = MC$$

- If $MR > MC$ produce more
- If $MR < MC$ produce less

4. Suppose a perfectly competitive firm is producing 5000 units of output and has total revenues of \$10,000. If this is a long run equilibrium, which of the following will be true
- a) total cost is \$5000
 - b) marginal cost is \$2
 - c) minimum average total cost is \$1
 - d) all of the above

Market Demand: $Q = 100,000 - 300P$

Market Supply: $Q = 100P$

1. What is the Market Price and Quantity?
2. Assuming a *Perfectly Competitive Market*, how many reports does the Economics Dept produce?
3. Graph the Econ Department's demand and supply curves.
4. What are the Econ Department's short run profits?
5. What would expect to happen in the long run?

1. Suppose that sugar is produced in a perfectly competitive constant cost industry. The diagrams below show short-run supply and demand for the industry as a whole, and the marginal cost curve for a representative sugar producer.

a) To the firm diagram, add the demand and MR curves faced by the firm.

Assuming that this is a long run equilibrium, add the long run industry supply curve to the industry diagram.

How many tons of sugar is each firm producing?

What is average total cost at this quantity? Briefly explain how you obtained your answers.

- b) Consumers decide to cut back on sugar consumption for health reasons, and will buy 10 less 100,000's of tons of sugar at any given price than before.

Assuming that this firm wants to continue producing in the short run, how many tons of sugar will the firm produce, and at what price?

c) **Briefly** describe how the sugar industry will move to a new long run equilibrium. Pay particular attention to exit and entry of firms, change in quantity produced by the firm, movements of firms' cost curves and demand curves and movements of industry supply curves.

Be sure to indicate how many tons of sugar the industry will produce and at what price it will be sold in the new LR equilibrium?