Practice

Competitive Market

Practice I

We consider the difference between the demand curve for a competitive industry and the demand curve facing an individual firm in that industry.

a) Explain what would happen if the individual firm tried to charge a higher price for its product.

b) Explain why the individual firm has no incentive to charge a lower price for its product.

c) Explain why the demand curve for an individual firm is horizontal at the current market price.

Practice II

Fill in the blanks to make the following statements correct.

a) The shut-down price is the price at which the firm can just cover its _____

b) If the average variable cost of producing any given level of output exceeds the price at which it can be sold, then the firms should _____

c) If a firm is producing a level of output such that MC>MR, that firm should _____output.

d) The profit maximizing level of output for a price-taking firm is the output at which MR and MC are _____ and the gap between TR and TC is _____.

e) If a perfectly competitive firm is producing its profit-maximizing level of output and the price of its output rises, then MR will be _____ MC and the firm should _____output.

Practice III

Consider the following table showing the various revenue concepts for DairyTreat Inc., a perfectly competitive firm that sells milk by the gallon. Suppose the firm faces a constant market price of $3 per gallon.

Price (p)	Quantity	Total Revenue (TR)	Average Revenue (AR)	Marginal Revenue (MR)
$3	150			
3	175			
3	200			
3	225			
3	250			

- Explain why for a perfectly competitive firm, AR=MR=p

- Plot the TR, MR and AR curves on a scale diagram. What is the slope of the TR curve?

Practice IV

Consider the following table showing the supply schedule for three competitive firms, each producing honey. Assume that these firms make up the entire industry.

a) Compute the total industry supply at each price and fill in the table.

b) Plot the supply curve for each firm and for the industry as a whole.

c) Explain why Firm B produces no output at prices $3 and lower, and why Firm C produces no output at prices $4 and lower.

Market price ($/lb)	Output (lb)			
	Firm A	Firm B	Firm C	Industry
2.50	100	0	0	
3.00	125	0	0	
3.50	150	100	0	
4.00	175	150	0	
4.50	200	200	100	
5.00	225	250	175	
5.50	250	300	250	
6.00	275	350	325	

Practice V

Consider the perfectly competitive barley industry. It is initially in long-run equilibrium at quantity Q_0 and P_0

a) Draw a supply and demand diagram for the barley market, showing the initial long-run equilibrium.
b) Draw a diagram for a typical firm when the industry is in its initial long-run equilibrium, showing its MC, ATC, and LRAC curves. Are any profits being earned by the typical barley farmer?

c) Now suppose that there is an increase in demand (caused by an increase in demand for beer, which uses barley as an input). Price rises to P_1. In your diagram, show the typical firm's response to the increase in market price from $P_0$and P_1. Show the typical firm's profits at this new price.

d) Explain how this industry adjusts to its new long-run equilibrium. Illustrate this adjustment both in the demand-and-supply diagram and in the diagram of the typical firm.