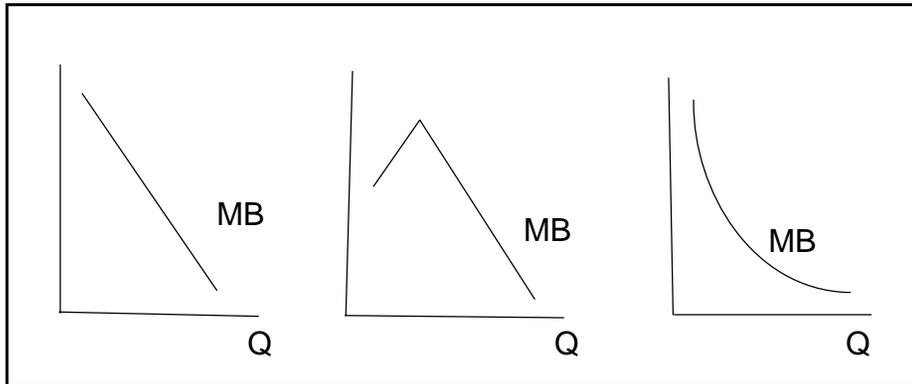


**Study Guide for First Exam**

1. Define and discuss briefly the relevance of the following terms (2-3 very clear sentences):

- |                             |                                 |
|-----------------------------|---------------------------------|
| a. net benefit              | j. demand curve                 |
| b. marginal cost            | k. normative statement          |
| c. consumer surplus         | l. rational choice              |
| d. marginal revenue         | m. isocost curve                |
| e. Marshallian LR supply    | n. scarcity                     |
| f. Ricardian LR supply      | o. market clearing price        |
| g. average cost             | p. price elasticity             |
| h. marginal product         | q. perfectly competitive market |
| i. marginal revenue product | r. price taker                  |

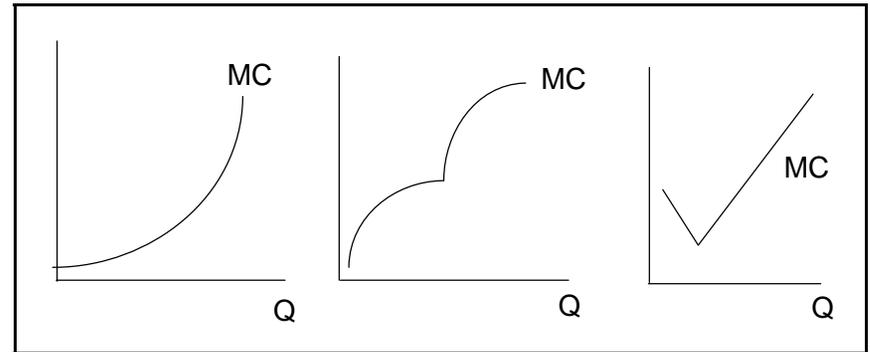
2. Given the MB curves below, derive the associated demand curves



- Briefly discuss the method used to derive the demand curves.
- How are your demand curves different from the MB curves?

3. Given the MC curves below, derive the associated supply curves.

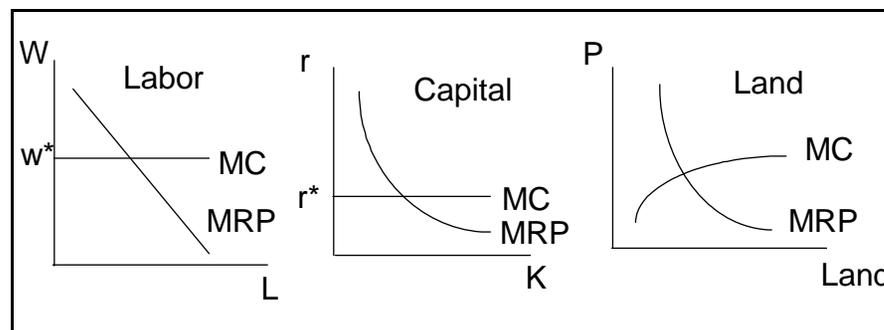
- Briefly describe the method used to derive the supply curves.
- Are these supply curves long run or short run curves? Why?
- How are your supply curves different from the MC curves?



- Draw an example of a consumer choice in which the consumer purchases none of some good of interest.
- Draw an example of a firm choice in which the firm purchases zero of some input of interest.
- Draw an example of a firm that produces zero of some good of interest at the prevailing market price.
- Draw a series of individual demand curves and derive the market demand curve associated with those curves. Label all details and briefly explain the method used.
- Draw a series of markets in equilibrium with downward sloping demand curves and upward sloping supply curves to illustrate the following:
  - Show what happens to price and output, if consumer income increases, other things being equal
  - Show what happens to price and output if the cost of labor in this industry increases, other things being equal.
  - Show what happens if the price of a substitute for this good falls.
  - Explain why demand and supply curves can be used to illustrate the gains from trade.
  - Show the distribution of profit and consumer surplus at the market equilibrium. Is this equilibrium efficient? In what sense(s)?

9. Suppose that the market for gasoline is characterized by a perfectly inelastic supply curve in the short run (vertical) and a fairly elastic (Ricardian) supply curve in the long run (upward sloping).
- Draw in a downward sloping demand curve and illustrate a “typical” LR equilibrium in this market. Include diagrams representing the choices of a typical consumer and a typical firm.
  - Now suppose that the MBs that consumers get from this product increase. Show the short and long run effects on price and output.
10. Suppose that the demand for gasoline is more elastic in the long run than in the short run, although neither perfectly elastic nor inelastic. Assume for this problem that LR supply is Marshallian.
- Use four diagrams to depict the market for gasoline in LR equilibrium, the output choice of a typical firm, the consumption choice of a consumer, and the production choice of the firm.
  - Show the short run and long run effects of a permanent increase in the price of petroleum (a necessary input for the production of gasoline). Note all relevant details.
  - Show the short run and long run effects of a change in consumer tastes which reduces the long run demand for gasoline (as would be the case for if urban living were suddenly more desirable or if the “preferred” automobile size suddenly became smaller).
11. Suppose that the market for doughnuts is characterized by a perfectly inelastic supply curve in the short run (vertical) and an elastic (Ricardian) supply curve in the long run. Suppose that the demand for doughnuts is downward sloping.
- Use four diagrams to depict the market for doughnuts in LR equilibrium, the output choice of a typical firm, the consumption choice of a consumer, and the production choice of the firm.
  - Show the short run and long run effects of a permanent increase in the price of wheat (a necessary input for the production of doughnuts). Note all relevant details.
  - Discuss briefly the differences between a Marshallian and Ricardian market in long run equilibrium.

12. Use the diagrams below to analyze a firm’s choice of input levels.
- Find the following firm’s optimal purchase of its major inputs. Label all details.
  - What happens to a firm’s purchases, if the MP of the various inputs increases?
  - What happens if the price of the output produced falls?



13. Suppose that a Ricardian market is initially in long run equilibrium.
- Illustrate the effect of a “price floor” for this market, with the regulated price above the original equilibrium price.
  - Are there industry profits and consumer surplus at your equilibrium? If so, explain why? Were these increased or decreased by the price floor?
  - Show what happens in this market if income rises through time
  - Show what happens if input prices increase through time.
14. Suppose that a Ricardian market is initially in long run equilibrium.
- Suppose that a barrier to entry is created, so that no firms can enter this market. What, if anything, occurs in the short run after this policy is put in place.
  - Now analyze what happens if income is rising and so demand is increasing.
  - Who wins and who loses from this policy in case B.

- D. What happens to a firm's marginal cost curves under this policy?
- E. What happens to the industry's marginal cost curve.
15. **Puzzle.** Suppose that a new public policy mandates that everyone purchase some minimum level of health care.
- Use MB and MC curves to show that this policy may have no effect on some individuals, while reducing net benefits for others. (Assume equilibrium healthcare prices are not affected by the new policy.)
  - Clearly label all details, including consumer surplus, in both cases.
  - Now, suppose that the policy increases prices by increasing the demand for health care.. Analyze the effects of this policy as before.
  - In what sense, if any, can it be argued that social net benefits are increased in case C?
16. **Puzzle.** Suppose that a Ricardian market is initially in long run equilibrium.
- Show the equilibrium situation for the market, a typical firm, and a typical consumer.
  - Show the effects of an excise tax on this market.
  - Show how this tax affects the profits and consumer surplus of a typical firm and consumer.
  - Does this tax have a deadweight loss? What exactly does deadweight loss mean in this market?
17. **Puzzle** with some math: Suppose that the market demand curve for orange juice is characterized by  $Q_d = 1000 - 5P + .1Y$  (where  $P$  is the price of orange juice and  $Y$  is average consumer income) and that the supply of orange juice is characterized by  $Q_s = 100 + 2P - 10P_o - 2w$  (where  $P$  is again the price of orange juice.  $P_o$  is the price of oranges, and  $w$  is the average cost of labor).
- Characterize the market clearing price and quantity in this market. Note all relevant details.
- Use this result to determine the effects of an increase in the wage rates of orange juice makers on market price and unit sales of orange juice.
  - Use your results to show the effects of an increase in average consumer income.
  - Use a diagram to depict the effects of both of these changes on equilibrium OJ price and quantity.
18. Explain how prices coordinate the decisions of thousands of firms and millions of consumers in competitive markets to induce markets to:
- reach a market clearing equilibrium
  - to adjust to natural disasters that reduce supplies of some input(s)
  - to adjust to changes in consumer tastes (MBs)
  - What did Adam Smith mean by the "invisible hand?"