

Name:

Econ 101 Practice Test #2

1. The market for airplanes is run by two firms: Boeing and Airbus. Suppose the market is described by the following inverse demand and marginal cost structure:

$$P = 500 - X$$

$$MC = 100 + X$$

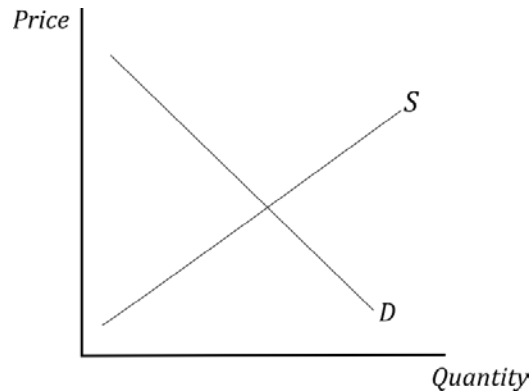
(Remember that if $P = b - mX$, then $MR = b - 2mX$)

- a. Boeing sells 100 airplanes. What is the inverse residual demand for Airbus? **(1.5 pts)**

- b. Boeing sells 100 airplanes. What is the marginal revenue curve faced by Airbus? **(1.5 pts)**

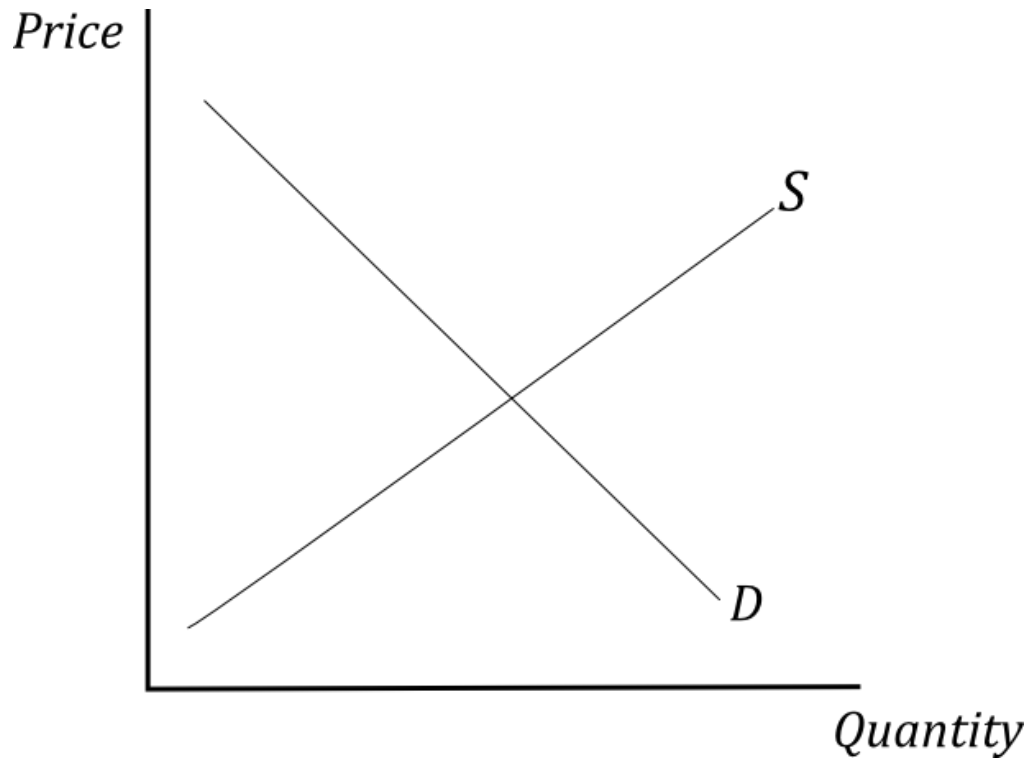
- c. Boeing sells 100 airplanes. How many airplanes should Airbus sell? **(3 pts)**

3. The diagram below illustrates the supply and demand for Vietnamese street food, a market that we assume is perfectly competitive. For each of the following statements, circle the word or phrase that makes each sentence true, and provide a brief explanation if asked.



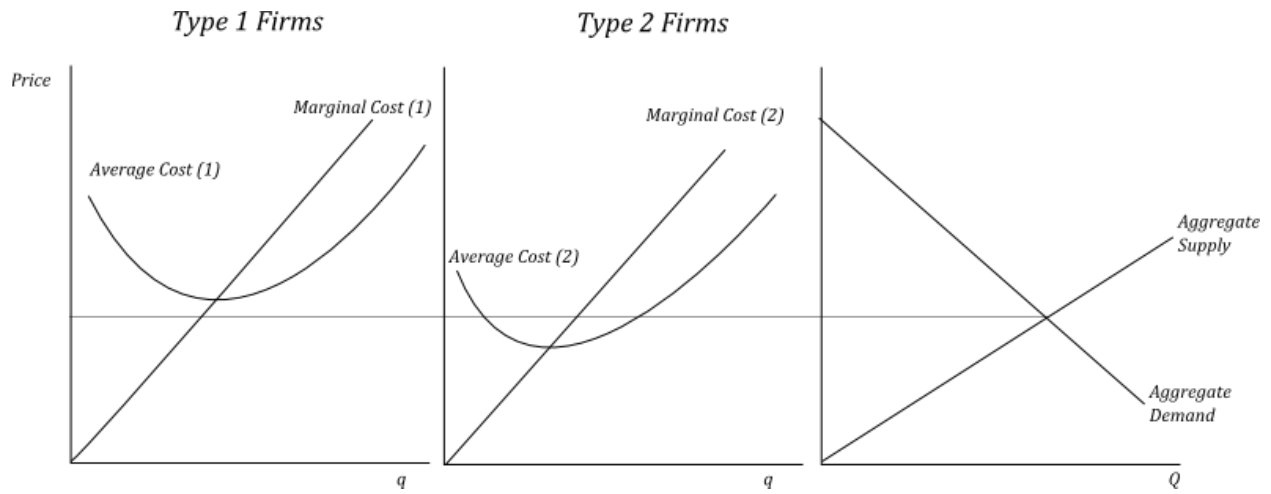
- a. A major street food festival is to be held tomorrow and people do not want to become sick of street food before it begins.
- The Demand curve does not move / shifts left / shifts right because **(1 pt)**
 - The Supply curve does not move / shifts left / shifts right because **(1 pt)**
 - The price of street food increases / decreases / is uncertain **(0.5 pts)**
 - The quantity of street food sold increases / decreases / is uncertain **(0.5 pts)**
- b. Vietnam relaxes its immigration policy, so that there is a large influx of people from neighboring countries.
- The Demand curve does not move / shifts left / shifts right because **(1 pt)**
 - The Supply curve does not move / shifts left / shifts right because **(1 pt)**
 - The price of street food increases / decreases / is uncertain **(0.5 pts)**
 - The quantity of street food sold increases / decreases / is uncertain **(0.5 pts)**

4. The following diagram gives the demand and marginal cost of producing goods.



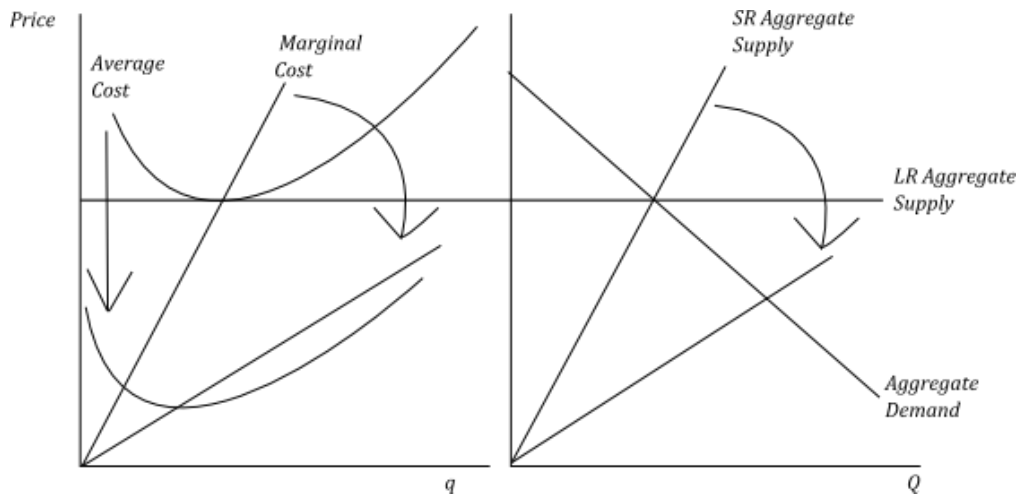
- Indicate on the above diagram the quantity that maximizes total welfare. **(1.5 pt)**
- Shade in the total welfare at your chosen quantity using vertical lines, such as ||| **(1 pt)**
- Shade in the consumer surplus, if there is any, using diagonal lines such as \\\ (0.5 pts)
- Shade in the producer surplus, if there is any, using backward diagonals like /// **(0.5 pts)**
- Shade in the deadweight loss, if there is any, using horizontal lines like = **(0.5 pts)**
- Why is perfect competition required for a market to maximize welfare? **(1 pt)**

5. Consider two firms with average costs as depicted below, and a short-run equilibrium as depicted.

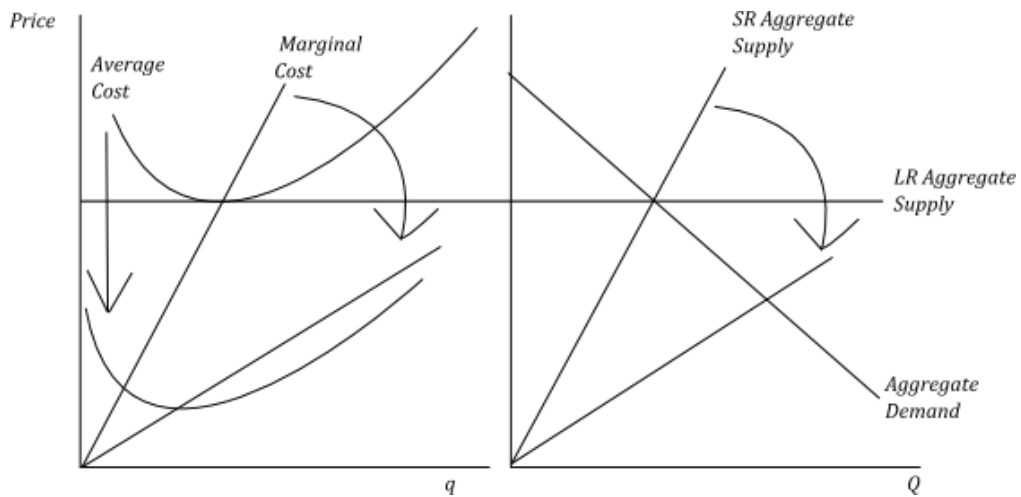


- Indicate the amount supplied by each firm and the average cost of each to produce goods. **(2 pts)**
- Which, if any, of the two types of firms will exit the market? **(1 pt)**
- Which, if any, of the two types of firms will new entrepreneurs copy when they enter? **(1 pt)**
- What will be the long-run impact of entry and exit on the average cost? **(1 pt)**

6. Consider the following long-run equilibrium. The left chart diagrams the market faced by an individual firm, the right chart diagrams the aggregate market. Suppose the cost of supplies permanently lowers the marginal and average cost of production for all firms, as indicated.

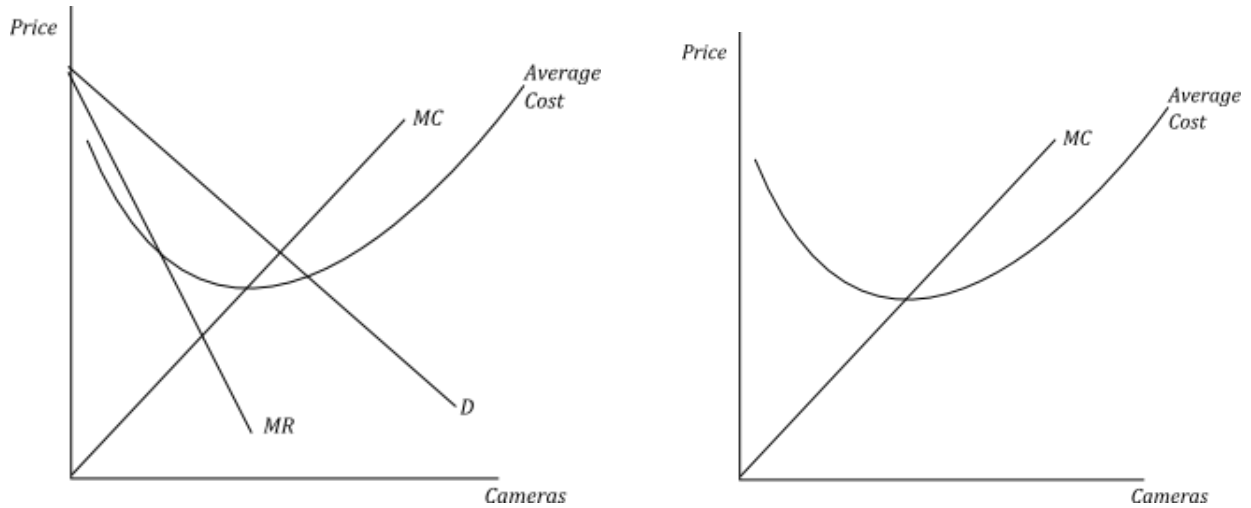


- Indicate the new short-run price for the market and faced by individual firms **(1 pt)**
- Indicate the new short-run quantity supplied by each firm, and by the market. **(1 pt)**



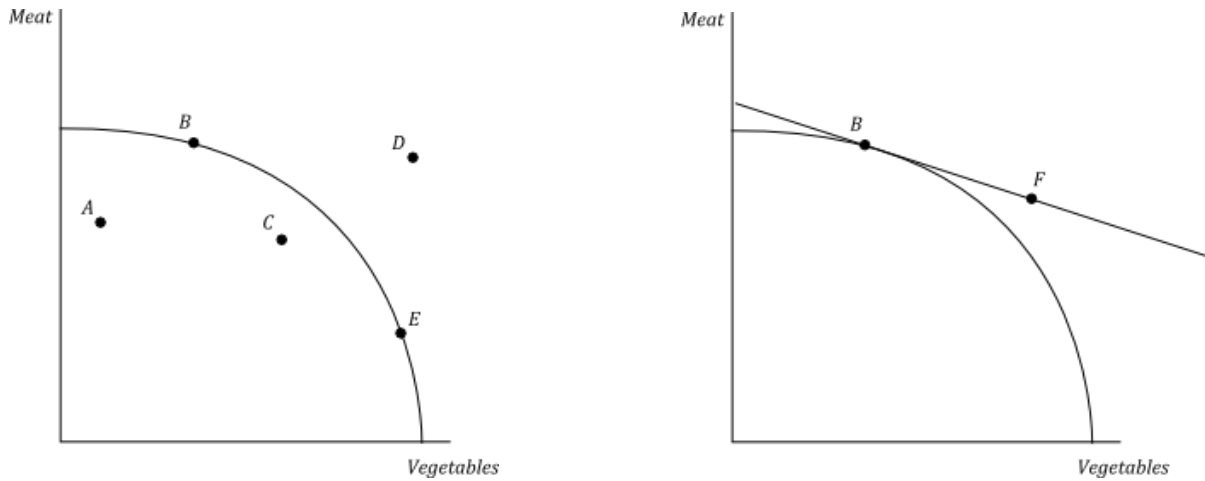
- On the above chart, indicate the new long-run aggregate supply. **(1 pt)**
- Indicate the new long-run quantity supplied by each firm, and by the market. **(1 pt)**
- Explain the mechanism by which the economy transitions from the short-run price and quantity to the long-run price and quantity. **(1 pt)**

7. Consider the market for digital cameras, which we model as monopolistic competition. Initially, there is one firm, Kodak, that makes digital cameras, with the equilibrium depicted at left below.



- Indicate on the left diagram the number of cameras made by Kodak, the price of each camera, and the average cost to produce each camera. **(1.5 pts)**
 - Given the left diagram, would we expect rival firms to imitate Kodak and enter, or would we expect Kodak to exit the market, and why? **(1 pt)**
- c. Suppose Nikon and Canon both enter the digital camera market, and then the market is in a long-run equilibrium. On the right diagram, draw a demand curve and a marginal revenue curve consistent with a long-run equilibrium. Also indicate the long-run quantity produced and price. **(1.5 pts)**

8. Suppose the diagram below gives the production possibilities frontier for various countries.



- a. For the left chart, label whether each point is feasible or infeasible, and, for the feasible ones, whether they are efficient or inefficient. **(2 pts)**
 - i. A
 - ii. B
 - iii. C
 - iv. D
 - v. E

- b. Suppose the prices of the two goods are as depicted in the right chart. Producers want to produce at point B, and consumers want to buy goods at point F. What goods are in shortage, and which are in surplus, if any? **(1 pt)**

- c. How do we expect prices to change? **(1 pt)**

- d. How will the quantity of meat and vegetables demanded and produced change, as a result of the price change? **(1 pt)**

9. Suppose the costs of production for England and France are given by the following table:

	Tea	Wine
England	5 lbs / man-hour	2 gallons / man-hour
France	2 car/ man-hour	5 gallons / man-hour

- a. What is the opportunity cost in England of making tea? **(0.5 pts)**

- b. What is the opportunity cost in England of making wine? **(0.5 pts)**

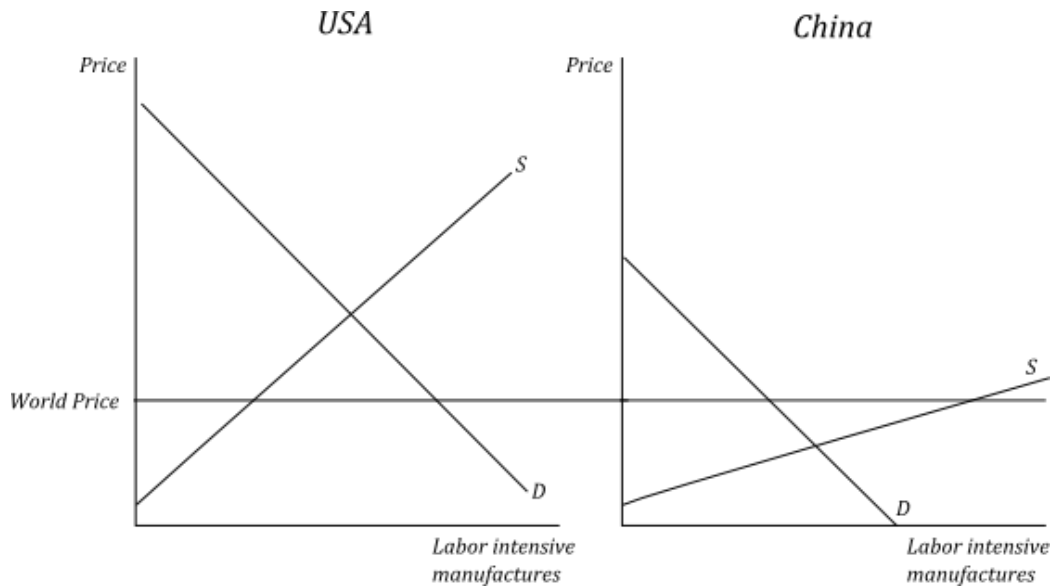
- c. What is the opportunity cost in France of making tea? **(0.5 pts)**

- d. What is the opportunity cost in France of making wine? **(0.5 pts)**

- e. For which good does England have a comparative advantage? **(1 pt)**

- f. What is the most Wine that France should be willing to give up to get 1 lb of tea from England? **(1 pt)**

10. Trade between China and the USA has increased dramatically since 1991. The following charts correspond to China and the USA's markets for labor intensive manufactures.



a. Based on the charts, which country is the exporter and which the importer? **(1 pt)**

b. Indicate on the charts what is exported and what is imported. **(1 pt)**

c. In which country do the producers gain from trade? Why? **(1 pt)**

d. In which country do the consumers gain from trade? Why? **(1 pt)**

e. Shade in the area corresponding to increase in welfare due to trade. **(1 pt)**