

NAME \_\_\_\_\_

Peking University  
Principles of Economics  
Spring 2024  
Dr. Jin Qin

Homework 2  
Due: Wednesday, April 24

**Instructions:**

1. Print your name on the answer sheet.
2. This homework assignment consists of 20 multiple-choice questions with each one worth 3 points and 2 short-answer questions for 40 points, 100 points total. Make sure you have a complete question set.
3. Please write down all your answers on the answer sheet. Answers written on the question sheet will NOT be graded.
4. The space provided on the answer sheet should be sufficient for your answer. If you need additional space, attach a blank paper.
5. Please write neatly. If I cannot read an answer, you will receive no credit for it.
6. Show enough of your work so that I can tell how you arrived at the answer. You will receive credit for sound reasoning. Partial credit will be awarded wherever I deem there is sufficient justification.
7. When drawing graphs, make sure to label everything, including the axes. It is not particularly important to draw your graphs with perfect precision.
8. Turn in the answer sheet ONLY.

**1. Refer to the table.**

<b>Labor (Number of Workers per Day)</b>	<b>Output (Hats per Day)</b>
<b>1</b>	<b>5</b>
<b>2</b>	<b>11</b>
<b>3</b>	<b>15</b>
<b>4</b>	<b>17</b>
<b>5</b>	<b>19</b>

The table above shows how the output of hats varies with the number of workers per day in a hat factory. Based on the data in the table, which of the following is true?

- A. The marginal product of labor is 5 hats per day when the number of workers is increased from 3 to 4 per day.
  - B. The marginal product of labor is 2 hats per day when the number of workers is increased from 3 to 4 per day.
  - C. The marginal product of labor is 3 hats per day no matter how many workers are employed.
  - D. The average product of labor is 3 hats per day no matter how many workers are employed.
2. The average product of agents in an insurance company is currently 5 policies written per month. If the company employs 428 agents, it is writing
- A. 428 policies per month.
  - B. 2,140 policies per month.
  - C. 2,508 policies per month.
  - D. 3,509 policies per month.
3. In a plant producing running shoes, the average product of labor is currently 100 running shoes per day. If the marginal product of labor is 80 running shoes per day, then employing more labor will
- A. increase the average product of labor.
  - B. decrease the average product of labor.
  - C. have no effect on the average product of labor.
  - D. cause the average product of labor to fall to zero.

**4. Refer to the table.**

<b>Labor (Number of Workers per Day)</b>	<b>Output (Yards of Fabric per Day)</b>
1	15
2	40
3	55
4	65
5	70
6	70
7	70

The table above shows how the output of wool fabric varies with the number of workers employed in a factory. Based on these data, the average product of workers in this factory

- A. declines steadily from 15 yards of fabric per worker per day to 10 yards of fabric per worker per day, as employment in the factory is increased from 1 to 7 workers.
- B. is equal to 20 yards of fabric per worker per day, no matter how many workers are employed per day.
- C. is maximized when 3 workers are employed per day.
- D. is maximized when 2 workers are employed per day.

**5. The law of diminishing marginal returns**

- A. explains the way output varies when all inputs are increased in the same proportion.
- B. explains the way output varies when some inputs are increased and others are decreased.
- C. is valid only in the long-run.
- D. explains the way output varies when one input is increased while all others are fixed.

6. The difference between the economic and accounting costs of a firm are
- A. the accountant's fees.
  - B. the corporate taxes on profits.
  - C. the opportunity costs of the factors of production that the firm owns.
  - D. All of the above.
7. Fixed costs are fixed with respect to changes in
- A. output.
  - B. capital expenditure.
  - C. wages.
  - D. time.
8. Which of the following would contribute to an increase in the average cost of producing airline service?
- A. A decrease in the average product of airline employees.
  - B. An increase in the average product of airline employees.
  - C. A decrease in wages paid to airline employees.
  - D. A decrease in monthly lease payments for equipment.
9. Which of the following is true of cost curves?
- A. The ATC curve goes through the minimum of the MC curve.
  - B. The AVC curve goes through the minimum of the MC curve.
  - C. The MC curve goes through the minimum of both the AVC curve and the ATC curve.
  - D. The MC curve goes through the maximum of both the AVC curve and the ATC curve.
10. Economists typically measure efficiency using
- A. the price paid by buyers.
  - B. the quantity supplied by sellers.
  - C. total surplus.
  - D. profits to firms.

**11. In a perfectly competitive market,**

- A. the products sold by each firm are only slightly different.**
- B. all firms produce and sell a homogeneous product.**
- C. the output sold by a particular firm may be quite different from the output sold by the other firms in the market.**
- D. one large firm controls the market and sets price, while the other smaller firms behave as price takers.**
- E. it is difficult for new firms to enter the market due to barriers to entry.**

**12. The demand curve for corn of a farmer selling in a perfectly competitive market will be**

- A. downward-sloping.**
- B. upward-sloping.**
- C. a vertical line.**
- D. a horizontal line.**

**13. The price of soybeans is \$17 a bushel. To maximize profits, a perfectly competitive firm selling soybeans must**

- A. produce soybeans up to the point at which average variable cost equals \$17.**
- B. adjust production until the marginal cost of soybeans is \$17.**
- C. produce all the soybeans it can.**
- D. produce soybeans up to the point at which fixed costs are minimized and variable costs are increasing.**

**14. The Perez Lumber Company sells boards in a perfectly competitive market. The output is 445 board feet per month. The price of lumber is currently \$3.57 per board foot, and the minimum possible average variable cost of producing lumber is \$3.88 per board foot. If the firm is rational, it should**

- A. shut down immediately.**
- B. continue producing at its current output level.**
- C. decrease monthly output to 200 board feet.**
- D. increase monthly output above 445 board feet.**

**15. In the short-run, a perfectly competitive firm's supply curve is**

- A. the portion of its marginal cost curve above the average variable cost curve.**
- B. its entire marginal cost curve.**
- C. its average cost curve.**
- D. a horizontal line.**

**16. For a firm to successfully exercise monopoly power to increase its profits,**

- A. there must be a barrier to entry of other sellers into its market.**
- B. the demand for the firm's product must be strong enough to allow it to cover its costs at the profit-maximizing output.**
- C. there must be free entry of sellers into the market.**
- D. there must be many other sellers in the market seeking to maximize profits.**

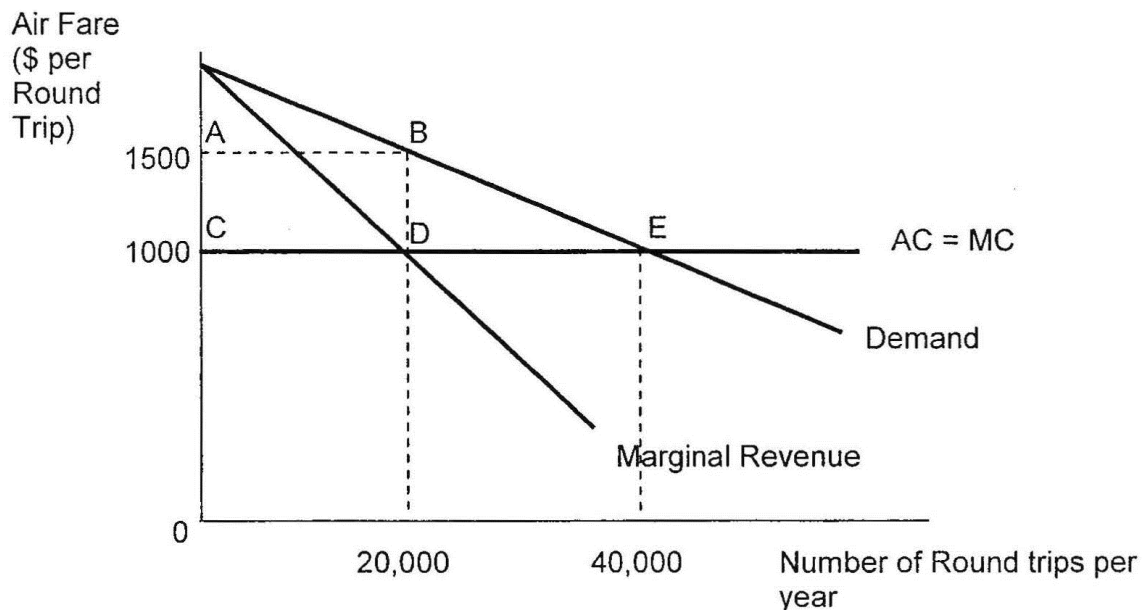
**17. The demand curve for a monopolist differs from that of a perfectly competitive firm in that**

- A. the demand curve for a perfectly competitive firm lies above its marginal revenue curve.**
- B. the demand curve for a perfectly competitive firm is inelastic.**
- C. the demand curve for a monopolist is the market demand curve.**
- D. the demand curve for a monopolist lies below its marginal revenue curve.**
- E. the demand curve for a monopolist is horizontal.**

**18. A monopoly firm selling textbooks is currently maximizing profits by charging a price of \$100 per book. It follows that the marginal cost of textbooks**

- A. is equal to \$100.**
- B. is less than \$100.**
- C. is greater than \$100.**
- D. equals the average revenue from textbooks.**

Questions 19 – 20 refer to the following figure. The graph below shows the demand, marginal revenue along with the average and marginal cost of airline travel between New York City and London.



19. If all airline travel between the U.S. and London is monopolized by British Airways, then which of the following statements is true assuming that the airline maximizes profit?

- A. The price that British Airways sets will be \$1500 per round trip.
- B. British Airways will set the fare of a round trip at \$1000 and earn zero economic profits.
- C. British Airways will earn economic profit equal to the area ABDC.
- D. Both A and C.

20. The social cost of the monopoly is represented by the area

- A. ABDC
- B. BDE
- C. ABDC + BDE
- D. ABDC – BDE

**21. The dining halls on campus at PKU sell soy eggs at different prices. Compare this market with a perfectly competitive market, and discuss how this market is consistent and contradictory with a perfectly competitive one. Explain in detail.**



**22. The production of Fiori is monopolized by Mr. Brown domestically, while the foreign market for this product is perfectly competitive. Domestic and foreign producers face the same marginal cost curve to produce Fiori. In the meantime, Mr. Brown could purchase Fiori from the foreign market and sell them in the domestic market, and each unit of Fiori purchased from the foreign market requires a fixed transportation cost to ship it home.**

- 1) Graph a figure to show the average cost, marginal cost, marginal revenue and demand curves for Mr. Brown. Label everything clearly.**
- 2) Suppose Mr. Brown is rational. In the figure, label the profit of Mr. Brown and the deadweight loss in the domestic market.**