

7/6/2003

ECONOMICS 211

FINAL EXAM

TIME DURATION: 150 MINUTES

INSTRUCTOR: RAMADAN

ANY PAPER WITHOUT A NAME AND STUDENT NUMBER WILL BE CANCELLED

NAME: Key STUDENT#: \_\_\_\_\_

100 QUESTIONS. CIRCLE THE RIGHT ANSWER

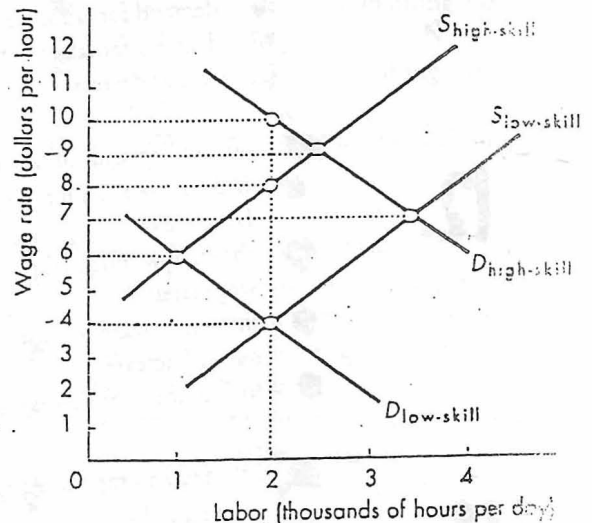
1. Why are college graduates get paid more, on average, than high school graduates?
- The supply of college graduates is less than the supply of high school graduates.
  - College graduates have higher marginal products than do high school graduates.
  - The demand for college graduates exceeds the demand for high school graduates.
  - All of the above answers are correct.

2. A market structure in which there is only one buyer is a(n)
- monopoly.
  - monopsony.
  - oligopoly.
  - competitive market.

3. If your labor supply increases when you get a raise, which of the following is true?
- Your substitution effect is greater than your income effect.
  - Your substitution effect is less than your income effect.
  - Your substitution effect equals your income effect.
  - None of the above answers are correct.

4. A backward-bending supply curve of labor exists whenever
- the substitution effect of a wage increase is larger than the income effect of that wage increase.
  - the substitution effect of a wage increase is smaller than the income effect of that wage increase.
  - the substitution effect and the income effect of a wage increase work in the same direction.
  - the substitution effect and the income effect of a wage increase work in opposite directions.

5. Average fixed cost is equal to
- total cost divided by quantity.



6. The above figure shows the demand and supply curves for high-skilled and low-skilled labor. The wage differential between high-skilled and low-skilled labor is
- \$4.00.
  - \$5.00.
  - \$6.00.
  - \$7.00.

7. The above figure shows the demand and supply curves for high-skilled and low-skilled labor. The wage rate
- of high-skilled labor is \$7.00 and of low-skilled labor is \$6.00.
  - of high-skilled labor is \$9.00 and of low-skilled labor is \$7.00.
  - of high-skilled labor is \$6.00 and of low-skilled labor is \$4.00.
  - of high-skilled labor is \$9.00 and of low-skilled labor is \$4.00.

8. When a group is discriminated against in wages fall but its employment does not employment and its wages decrease.
-

9.

If there is a change in legislation that makes it easier for hospitals to substitute other health care professionals for nurses, then the demand for nurses will become

- less elastic
- more elastic
- this change will not affect the elasticity of demand for nurses
- first more elastic, then less elastic

16.

All else equal, if violins are produced using a production process in which capital cannot be readily substituted for labor, then the

- demand for labor will be highly elastic.
- demand for labor will be somewhat elastic.
- demand for labor will be unit elastic.
- demand for labor will be inelastic.

11.

When the price of the product it produces rises, the firm's

- demand for labor curve shifts rightward.
- demand for labor curve shifts leftward.
- demand for labor curve remains unchanged.
- output decreases.

12.

A firm's demand for labor curve

- is the same as its marginal revenue product of labor curve.
- shows how much labor the firm hires at different wage rates.
- shifts rightward when the price of the firm's output increases.
- ALL of the above answers are correct.

13.

The demand for labor depends on:

- I. Technology
  - II. Prices of resources other than labor
  - III. Price of the product.
- I and II
  - II and III
  - I and III
  - I, II and III

14.

If the current wage ( $W$ ) is less than the marginal revenue product ( $MRP$ ), then the firm should

- hire less labor, which will increase the  $MRP$ .
- hire more labor, which will decrease the  $MRP$ .
- hire no more or less labor, because profits are greatest when  $W < MRP$ .
- hire more labor, because hiring more labor will increase the  $W$  and  $MRP$  until they are equal.

15.

Which of the following indicates that a firm is maximizing its profit?

- I. Marginal revenue equals marginal cost.
  - II. Marginal revenue product equals the wage.
- I only
  - II only
  - Both I and II.
  - Neither I nor II

16.

Which of the following is NOT a profit maximizing condition under perfect competition?

- Marginal revenue = marginal cost.
- Marginal revenue product = wage rate.
- Price = marginal cost.
- None of the above because all the conditions are profit maximizing.

Quantity of labor (workers)	Output (units)	Marginal revenue product (dollars)	Total revenue (dollars)
0	0	0	0
1	10	100	100
2	18	80	180
3	24	60	240
4	28	40	280
5	30	20	300

17.

Based on the production and revenue data in the table above, what is the marginal product of the 4th worker?

- 28.
- 6.
- 4.
- 2.

18.

Based on the production and revenue data in the table above, what is the price of the product?

- \$100.
- \$10.
- \$1.
- More information is needed to determine the price of the product.

19.

Based on the production and revenue data in the table above, if the wage rate is \$20 per worker, how many workers will be hired?

- 5.
- 4.
- 3.
- 2.

20.

A firm should hire more workers as long as

- marginal revenue exceeds the wage.
- marginal revenue is less than the wage.
- marginal revenue product exceeds the wage.
- marginal product exceeds the wage.

21.

If a firm that can sell its output for \$40 per unit decides to increase its labor force from 4 workers to five, and output increases from 28 to 30 units, the marginal revenue product of the 5th unit of labor is

- \$680.
- \$340.
- \$80.
- \$40.

1.2/9

Labor (workers)	Output (haircuts per day)
0	0
1	24
2	36
3	44
4	48
5	50

26.

The above table has output information for Joe's Barber Shop. Joe charges \$6 per haircut. The firm's marginal revenue product of labor for the third worker is equal to:

- \$264.
- \$48.
- \$8.
- \$6.

27.

The above table has output information for Joe's Barber Shop. Joe charges \$6 per haircut. If the wage rate is \$24 per worker, what quantity of labor will maximize profits?

- 1 worker.
- 2 workers.
- 4 workers.
- 5 workers.

28.

The above table has output information for Joe's Barber Shop. Joe charges \$6 per haircut. If the wage rate falls from \$24 per worker to \$12 per worker, what happens to the quantity of labor hired?

- it will increase and the new number of workers hired is 2.
- it will decrease and the new number of workers hired is 2.
- it will increase and the new number of workers hired is 5.
- it will increase and the new number of workers hired is 3.

29.

		Firm A	
		Monopoly price	Competitive price
Firm B	Monopoly price	A: \$5 B: \$5	A: \$8 B: -\$1
	Competitive price	A: -\$1 B: \$8	A: \$0 B: \$0

30.

The above payoff matrix shows the economic profits (in millions of dollars) of two firms in a duopoly that have agreed to a cartel agreement to restrict their output and set their prices equal to the monopoly price. Assuming the game is played once, the equilibrium outcome is where

- both choose the monopoly price.
- both choose the competitive price.
- firm A chooses the monopoly price and firm B chooses the competitive price.
- firm B chooses the monopoly price and firm A chooses the competitive price.

31.

32.

As the quantity of labor increases, marginal revenue product for a perfectly competitive firm

- decreases because the firm must lower price to sell a larger quantity.
- decreases because the marginal product of labor decreases.
- decreases because marginal revenue decreases.
- is constant because marginal revenue is constant.

The demand for productive resources is driven by the demand for goods and services produced by that resource. This phenomenon is referred to as

- elastic demand.
- joint demand.
- inverse demand.
- derived demand.

The marginal revenue product of labor is defined as

- the change in total revenue obtained from producing one more unit of output.
- the change in output from hiring one more worker.
- the change in profit from hiring one more worker.
- the change in total revenue from hiring one more worker.

A prisoners' dilemma-type game

- yields a dominant strategy non-cooperative equilibrium in a single play of the game.
- may yield a cooperative equilibrium in a repeated game if players communicate.
- may yield a cooperative equilibrium in a repeated game if players fear each other.
- All of the above answers are correct.

The ABC Nail Company has entered into a collusive agreement with the other firm in the industry, the DC Nail Company. What occurs in the nail industry if ABC decides to cheat on the agreement?

- ABC lowers the price of its nails.
- The total industry output increases.
- The total profits in the nail industry will decrease.
- All of the above answers are correct.

If both firms in a duopoly cheat on a collusive agreement, the

- prices will fall and both firms are better off.
- prices will rise and both firms are worse off.
- prices will fall and both firms are worse off.
- prices will rise and both firms are better off.

In the prisoners' dilemma,

- the dominant strategy is to confess.
- the dominant strategy is to deny.
- the dominant strategy depends on how the other player reacts.
- there is no dominant strategy.

22.

23.

24.

25.

1/10

		American	
		Cheat	Comply
National	Cheat	A: \$0 N: \$0	A: -\$2,000 N: \$4,000
	Comply	A: \$4,000 N: -\$2,000	A: \$3,000 N: \$3,000

33.

There are two can companies, American and National which have entered into a collusive agreement. The payoff matrix of economic profits is above. If both firms cheat on the collusive agreement, what amount of economic profit is earned by American?

- \$0
- \$3,000
- \$4,000
- \$2,000

34.

There are two can companies, American and National which have entered into a collusive agreement. The payoff matrix of economic profits is above. If National is able to cheat on the agreement but American complies with the agreement, what amount of economic profit will be earned by National?

- \$2,000
- \$3,000
- \$4,000
- \$6,000

35.

Oligopolies are always characterized as

- producing identical goods.
- producing differentiated goods.
- colluding whenever possible.
- having firms whose prices and quantities depend on the prices and quantities set by the other competing firms.

36.

In the long-run equilibrium, firms in a monopolistically competitive industry produce at an output level where

- $P > ATC$  but  $MR = MC$ .
- $P > ATC$  and  $MR > MC$ .
- $P = ATC$  and  $MR = MC$ .
- $P = ATC$  but  $MR > MC$ .

37.

When new firms enter a monopolistically competitive industry,

- each existing firm's demand curve shifts rightward.
- each existing firm's demand curve shifts leftward.
- each existing firm's marginal cost curve shifts rightward.
- each existing firm's marginal cost curve shifts leftward.

38.

Product differentiation exists within an industry if

- there are no substitutes for a product.
- there are close but not perfect substitutes for a

2/4/9

In a prisoners' dilemma game, which of the following strategies gives the best outcome for prisoners?

- Both deny (collusion).
- Both confess (not collude).
- One confesses while the other denies.
- None of the above.

Economic profit in monopolistic competition definitely leads to

- a leftward shift in each firm's demand curve as new firms enter the market.
- a rightward shift in each firm's demand curve as new firms enter the market.
- an upward shift in each firm's cost curve as new firms enter the market.
- All of the above answers are correct.

A firm is said to have excess capacity when

- it produces a level of output such that price is greater than marginal cost.
- it produces a level of output such that total revenue is greater than marginal cost.
- it produces a level of output smaller than that which minimizes average total cost.
- it produces a level of output larger than that which minimizes average total cost.

Which of the following is TRUE about a firm maximizing monopolistically competitive profit in its long-run equilibrium?

- $P = MC$ .
- $P = MR$ .
- $ATC = MC$ .
- $P = ATC$ .

When comparing perfect competition and monopolistic competition, we find that

- monopolistically competitive firms produce identical products like perfectly competitive firms
- monopolistically competitive firms face a barrier to entry, unlike perfectly competitive firms
- advertising plays a large role in monopolistic competition, unlike in perfect competition
- monopolistically competitive firms earn economic profit, unlike perfectly competitive firms.

Which of the following is not true?

- Both monopolies and monopolistically competitive firms can determine what price to set.
- In the long run, both monopolies and monopolistically competitive firms earn no economic profit.
- Both monopolies and monopolistically competitive firms produce so that  $MR = MC$ .
- In the short run, both monopolies and monopolistically competitive firms can earn economic profit.

**Product differentiation**

- www.ama... causes the monopolistic competitor to face a downward-sloping demand curve.
- means that the monopolistic competitor's product is a close but not perfect substitute for the products of its competitors.
- enables the monopolistic competitor to compete in product quality.
- All of the above answers are correct.

**Price discrimination by a monopolist is less effective if**

- the good can be resold.
- the good has no substitutes.
- the monopolist can identify buyers by willingness-to-pay.
- the good cannot be resold.

Price (dollars)	Quantity demanded	Marginal revenue (dollars)	Total cost (dollars)
30	0	0	25
27	1	27	28
24	2	21	33
21	3	15	40
18	4	9	49
15	5	3	60
12	6	-3	73
9	7	-9	88

Using the data in the above table for a single-price monopolist, how many units of output will be produced?

- 3 units.
- 4 units.
- 5 units.
- 6 units.

Using the data in the above table for a single-price monopolist, how much total economic profit does the monopolist earn?

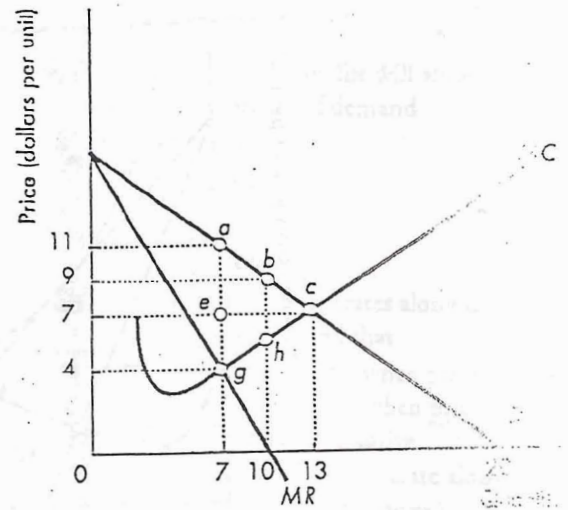
- \$9.
- \$23.
- \$13.
- \$72.

If the single-price monopolist whose cost and demand data are in the above table were forced to produce 5 units of output, what would be the monopolist's economic profit?

- \$11.
- \$3.
- \$75.
- \$15.

To maximize profit, a monopolist produces on the \_\_\_\_\_ portion of its demand where \_\_\_\_\_.

- elastic;  $P = MC$
- elastic;  $MR = MC$
- inelastic;  $P = MC$
- inelastic;  $MR = MC$



Consider the monopolist depicted in the fig. above. The profit maximizing level of output for a single-price monopolist is

- 7.
- 11.
- 13.
- 22.

Consider the monopolist depicted in the fig. above. The price a single-price monopolist would charge for the profit-maximizing level of output is

- \$4.
- \$7.
- \$9.
- \$11.

If the above figure illustrated a perfectly competitive industry, the equilibrium industry output would be equal to

- 7.
- 11.
- 13.
- 22.

If the above figure illustrated a perfectly competitive industry, the equilibrium industry price would be equal to

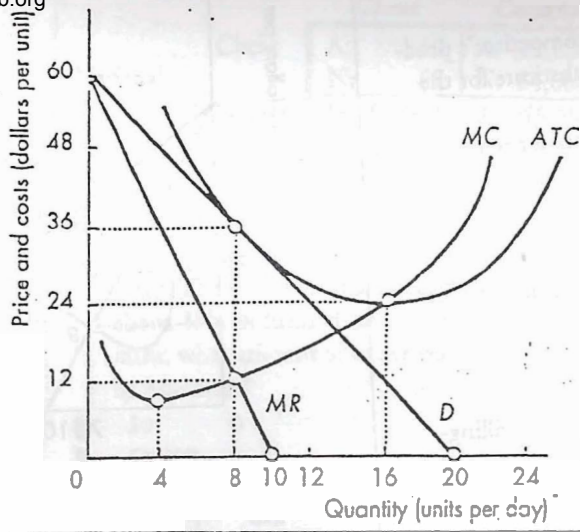
- \$4.
- \$7.
- \$9.
- \$11.

In the above figure, if a single-price monopolist maximized its profit, the deadweight loss in the market is equal to the area

- ace
- acg
- ecg
- bch

In the long-run, a single-price monopolist will

- not be able to continue to earn economic profit and will break even with a normal profit.
- be able to continue to earn economic profits as long as the market remains a monopoly.
- end up being regulated by the government because it is making short-run economic profits.



The above figure depicts a monopolistically competitive firm. What is the profit maximizing level of output the firm will produce?

- 4 units per day
- 8 units per day
- 10 units per day
- 16 units per day

The above figure depicts a monopolistically competitive firm. What price should the firm charge?

- \$12.
- \$24.
- \$36.
- None of the above answers are correct.

The above figure depicts a monopolistically competitive firm. At the profit maximizing level of output,

- the firm is making economic profit.
- the firm incurs an economic loss.
- the firm is making zero economic profit.
- this firm would choose to shut down in the short run.

The above figure depicts a monopolistically competitive firm. At the profit maximizing level of output, excess capacity for the firm is equal to:

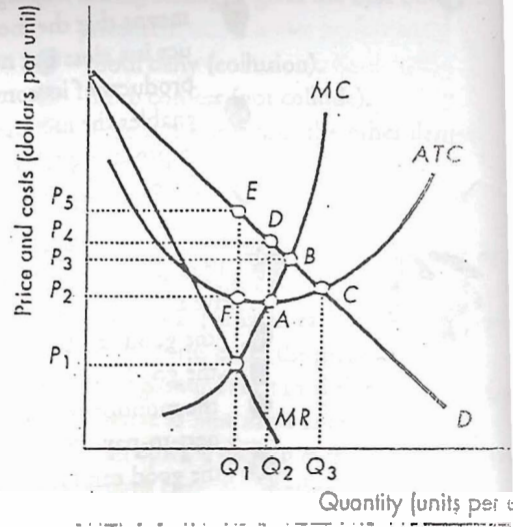
- 0 units per day.
- 4 units per day.
- 8 units per day.
- 16 units per day.

As a result of using the marginal cost pricing rule to regulate a natural monopoly,

- the natural monopoly will incur an economic loss.
- the natural monopoly earns a normal profit.
- the monopolist produces an inefficient amount of product.
- the monopolist is allowed to cover all its costs and earn a normal profit.

In the case of a perfectly price-discriminating monopoly, there is no

- transfer of consumer surplus to the producer.



In the above figure, the monopolistically competitive firm produces

- $Q_3$  and sets the price at  $P_3$ .
- $Q_2$  and sets the price at  $P_2$ .
- $Q_1$  and sets the price at  $P_1$ .
- $Q_1$  and sets the price at  $P_5$ .

In the above figure of a monopolistically competitive firm, the marginal cost of the last unit produced is

- equal to  $P_2$  and is greater than marginal revenue.
- equal to  $P_3$  and is greater than marginal revenue.
- equal to  $P_1$  and is greater than marginal revenue.
- equal to  $P_1$  and is equal to marginal revenue.

In the above figure of a monopolistically competitive firm, the area of economic profit is

- $ADB$
- $ABC$
- $P_2ADP_4$
- $P_2FEP_5$

The above figure shows a monopolistically competitive firm. The figure

- is only a short-run illustration, because the firm is earning an economic profit.
- could be either a short-run or long-run illustration because monopolistically competitive firms can earn an economic profit in the long-run.
- is only a long-run illustration because the firm is earning only a normal profit.
- is neither a short- nor a long-run illustration.

In the above figure, in the long run, this monopolistically competitive firm will

- produce more output at a higher price, with no change in costs of production.
- produce less output at a lower price, assuming no change in costs of production.
- produce the same quantity at the same price.
- Any of the above are possible.

45

46

47

48

49

50

5/5/1

Quantity (units)	Price (dollars per unit)
1	8
2	7
3	6
4	5
5	4
6	3

The table above gives the demand for a monopolist's output. Between which two quantities is marginal revenue equal to 0?

- 4 and 5
- 3 and 4
- 2 and 3
- 1 and 2

The table above gives the demand for a monopolist's output. Between which two quantities is demand elastic?

- 6 and 5
- 5 and 4
- 4 and 3
- 3 and 2

The table above gives the demand for a monopolist's output. What is the total revenue in the when 3 units of output are produced?

- \$21.
- \$20.
- \$18.
- \$6.

The table above gives the demand for a monopolist's output. What is the marginal revenue when output is increased from 5 to 6 units?

- \$18.
- \$4.
- \$3.
- \$2.

The table above gives the demand for a monopolist's output. What is the marginal revenue when output is increased from 2 to 3 units?

- \$18.
- \$4.
- \$7.
- \$6.

If a monopolist was operating in a price range where marginal revenue was negative it would be in the inelastic range of the demand for its product.  
 it would be in the unit elastic range of the demand for its product.  
 it would be in the elastic range of the demand for its product.  
 it would be maximizing revenue but not profits.

A single-price monopolist will always produce where the elasticity of demand

- is greater than 1.
- is smaller than 1.
- equals 1.
- equals infinity.

A monopolist that operates along the elastic range of its demand will find that

- total revenue increases when price decreases.
- total revenue decreases when price decreases.
- marginal revenue is negative.
- it is more profitable to operate along the elastic range of the demand curve.

For a single-price monopolist,

- $MR = P$  always.
- $MR < P$  always.
- $MR$  first increases and then decreases with quantity sold.
- $MR$  first decreases and then increases with quantity sold.

A monopolist can

- sell as much as he or she wants at the chosen price because he or she is the only seller.
- increase price and quantity sold at the same time.
- increase price only if he or she is willing to decrease the quantity sold.
- is not restricted by the law of demand.

A natural monopoly is defined as:

- a market in which competition and entry are restricted by the granting of a government license.
- an industry in which one firm can supply the entire market at a lower price than two or more firms.
- a market in which competition and entry are restricted by the granting of a patent.
- any market where one firm constitutes the entire industry.

If the government grants a firm a public franchise to supply coal, a monopoly is created by

- a natural barrier to entry.
- a legal barrier to entry.
- price discrimination.
- All of the above answers are correct.

Which of the following is NOT a decision firm must make in the short run?

- Whether to enter or leave an industry.
- Whether to produce or shut down.
- What quantity to produce.
- None of the above answers are correct because all are decisions firms must make in the short run.

Quantity (gloves per day)	Total cost (dollars)
0	80
1	100
2	105
3	135
4	170
5	210
6	270
7	350
8	450

The above table shows the per day total cost for Kiley's Baseball Glove Company. Each glove is priced at \$50 and Kiley's Baseball Glove Company is a perfectly competitive firm. Between which two output levels does Kiley's Baseball Glove Company earn an economic profit?

- 0 and 8
- 1 and 8
- 2 and 7
- 3 and 6

In perfect competition,

- the market demand for the good is perfectly elastic but the demand for the output of one firm is not perfectly elastic.
- the market demand for the good is not perfectly elastic but the demand for the output of one firm is perfectly elastic.
- both the market demand for the good and the demand for the output of one firm are perfectly elastic.
- neither the market demand for the good nor the demand for the output of one firm is perfectly elastic.

Perfectly competitive firms have a total revenue curve that is

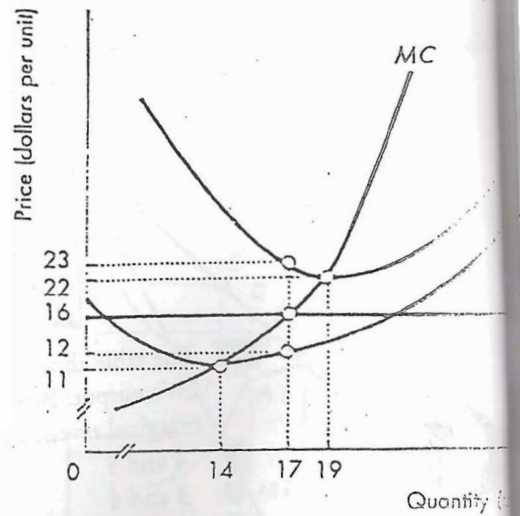
- upward sloping with increasing slope.
- downward sloping with constant slope.
- upward sloping with decreasing slope.
- upward sloping with constant slope.

If demand for Farmer John's maple syrup is inelastic, then when Farmer John raises the price of maple syrup, his total revenue will

- increase.
- decrease.
- stay the same.
- probably change, but more information is needed to determine if the total revenue increases, decreases, or stays the same.

Increasing opportunity cost is due to

- firms' needs to earn more and more profits.
- ever increasing taxes.
- the fact that it is more difficult to use resources efficiently the more society produces.
- the fact that resources are not equally suited for



Consider the perfectly competitive firm in the above figure. The profit maximizing level of output for the firm is equal to

- 0 units.
- 14 units.
- 17 units.
- 19 units.

Consider the perfectly competitive firm in the above figure. At the profit maximizing level of output, the firm is earning

- an economic loss equal to \$119.
- an economic loss equal to \$114.
- an economic loss equal to \$102.
- a normal profit.

Consider the perfectly competitive firm in the above figure. The shutdown point occurs at a price of

- \$11.
- \$12.
- \$16.
- \$22.

Consider the perfectly competitive firm in the above figure. What will the firm choose to do in the short-run and why?

- Shut down because the firm incurs an economic loss.
- Stay in business because the firm is making an economic profit.
- Stay in business because the firm's economic profit is less than fixed costs.
- Stay in business, but produce a different level of output, because the firm incurs an economic loss.

Consider the perfectly competitive firm in the above figure. At what price will long-run equilibrium occur?

- \$11.
- \$12.
- \$22.
- \$23.

If demand is inelastic, an increase in the price will

- decrease total revenue.
- increase total revenue.



Labor (workers)	Output (bikes)	Total fixed cost (dollars)	Total variable cost (dollars)	Total cost (dollars)
0	0	200	0	200
1	20	200	100	300
2	50	200	200	400
3	60	200	300	500
4	64	200	400	600

The table above gives costs at Jan's Bike Shop. Unfortunately, Jan's record keeping has been spotty. Each worker is paid \$100 a day. Labor costs are the only variable costs of production. What is the total cost of producing 50 bikes?

- \$100
- \$200
- \$300
- \$400

The table above gives costs at Jan's Bike Shop. Unfortunately, Jan's record keeping has been spotty. Each worker is paid \$100 a day. Labor costs are the only variable costs of production. What is the total fixed cost associated with producing 64 bikes?

- \$200
- \$300
- \$400
- \$500

The table above gives costs at Jan's Bike Shop. Unfortunately, Jan's record keeping has been spotty. Each worker is paid \$100 a day. Labor costs are the only variable costs of production. What is the total variable cost associated with producing 60 bikes?

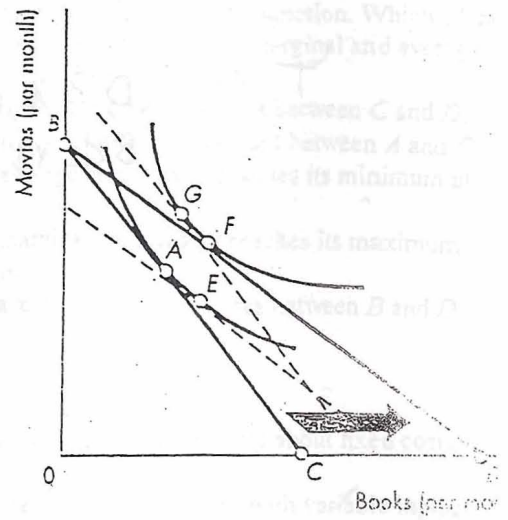
- \$200
- \$300
- \$400
- \$500

Which of the following causes the production possibility frontier to have a bowed out, curvilinear shape?

- The assumption that resources are specialized.
- The assumption that resources are not specialized.
- The scarcity of resources.
- The point that moving along the PPF technology is held constant.

The fact that opportunity costs increase while moving along a production possibility frontier suggests that a production possibility frontier for any economy will

- reach a minimum and then rapidly increase.
- be a straight line with a constant and positive slope.
- be bowed out, away from the origin.
- be bowed in, toward the origin.



Consider the change in the price of a book depicted in the above figure. The original budget line is BC. The new budget line is BD. As a result of this price change, the substitution effect is represented by a movement from

- point A to point E.
- point A to point G.
- point F to point G.
- point A to point F.

Consider the change in the price of a book depicted in the above figure. The original budget line is BC. The new budget line is BD. As a result of this price change, the income effect can be represented by a movement from

- point E to point F.
- point G to point A.
- point G to point F.
- point A to point F.

Price (dollars per cellular phone)	Quantity demanded (thousands)	Quantity supplied (thousand)
100	50	100
80	55	80
50	60	60
20	100	40

Using the data in the above table, the equilibrium quantity and equilibrium price for a cellular telephone is

- 50 thousand and \$100.
- 80 thousand and \$80.
- 60 thousand and \$50.
- 40 thousand and \$20.

Using the data in the above table, at the price of \$80 a phone, a

- shortage of 25 thousand cellular telephones occurs.
- surplus of 80 thousand cellular telephones occurs.
- surplus of 25 thousand cellular telephones occurs.
- shortage of 55 thousand cellular telephones occurs.