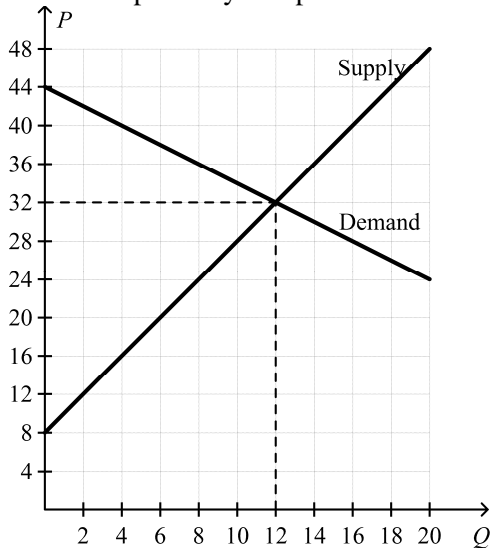


Figure SSD. The graph below describes supply and demand for a perfectly competitive market.



1. **See Figure SSD.** In equilibrium, consumer surplus is
 - a. \$108.
 - b. \$36.
 - c. \$144.
 - d. \$72.
2. **See Figure SSD.** The equilibrium allocation of resources is
 - a. efficient because total surplus is maximized when 12 units are produced and sold.
 - b. inefficient because total surplus is maximized when 20 units of output are produced and sold.
 - c. inefficient because consumer surplus is larger than producer surplus at the equilibrium.
 - d. efficient because consumer surplus is maximized at the equilibrium.
3. **See Figure SSD.** If 10 units of the good are produced and sold, then
 - a. the marginal cost of the last unit is the same as its marginal value to consumers.
 - b. total surplus is minimized.
 - c. producer surplus is maximized.
 - d. the marginal value of the last unit to consumers exceeds its marginal cost.
4. A tax placed on a good
 - a. causes the equilibrium quantity of the good to increase.
 - b. affects the welfare of buyers of the good but not the welfare of sellers.
 - c. causes an increase in the effective price paid by buyers.
 - d. creates a burden that is borne entirely by consumers.
5. In a complex economy, selling and buying is a more effective procedure for exchange than barter is, because
 - a. tax laws do not apply to barter transactions.
 - b. selling and buying requires the use of money.
 - c. selling and buying makes it easier to find trading partners.
 - d. selling and buying fosters a commercial environment.
6. An outward shift (away from the vertical axis) of the supply of lettuce could be caused by
 - a. an advertisement showing a photo of Hillary Clinton eating lettuce.
 - b. good weather in lettuce growing areas.
 - c. a decrease in the price of lettuce.
 - d. a report that lettuce prevents heart disease.
7. Compared to a person who earns \$15 per hour, a person who earns \$30 per hour has
 - a. the same opportunity cost of spending time on leisure activities.
 - b. a lower opportunity cost of driving farther to work.
 - c. a lower opportunity cost of working longer hours.
 - d. a higher opportunity cost of taking a day off.
8. A consumer is willing to pay \$12 for his first beer, \$8 for his second beer, \$5 for his third beer, \$3 for his fourth beer, and \$1 for his fifth beer. If the price is \$2, how much consumer surplus can he obtain?
 - a. \$18
 - b. \$22
 - c. \$20
 - d. \$16
9. In competitive economies, workers are often paid much more than would be required to make them willing to do their jobs, mainly because
 - a. most firms are rent-seeking.
 - b. firms will not pay economic rents to workers under competition.
 - c. good workers receive economic rents when firms compete with each other for labor.
 - d. firms cannot receive economic rents under competition.
10. If a consumer places a value of \$15 on a particular good and if the price of the good is \$17, then
 - a. there is going to be downward pressure on the price of the good.
 - b. the market is not a competitive market.
 - c. the consumer has consumer surplus of \$2 if he or she buys the good.
 - d. the consumer does not purchase the good.

11. If the labor supply curve is extremely inelastic, a tax on labor
 - a. has a large deadweight loss.
 - b. raises a small amount of tax revenue.
 - c. results in a large tax burden on the firms that hire labor.
 - d. has little impact on the amount of work that workers are willing to do.

Scenario MMON. A small town has two bars in which residents can drink beer. Each bar owner must decide whether to set a high price or a low price for beer without knowing what the other bar owner has done. The payoff table, showing profit per week, is provided below. The profit in each cell is shown as (Bar 1, Bar 2).

		Bar 2	
		Low Price	High Price
Bar 1	Low Price	(250, 250)	(400, 50)
	High Price	(50, 400)	(325, 325)

12. **See Scenario MMON.** What is Bar 1's dominant strategy?
 - a. setting a low price
 - b. choosing a high or low price at random
 - c. setting a high price
 - d. none of the above
13. **See Scenario MMON.** What is the Nash equilibrium of this price-setting game?
 - a. Bar 1: Low price
Bar 2: Low price
 - b. Bar 1: High price
Bar 2: Low price
 - c. Bar 1: High price
Bar 2: High price
 - d. Bar 1: Low price
Bar 2: High price
14. **See Scenario MMON.** This game is most similar to
 - a. the Prisoners' Dilemma
 - b. Matching Pennies
 - c. the Battle of the Sexes
 - d. Offense vs. Defense
15. If a social planner were running a nondiscriminating monopoly, the planner could achieve an efficient outcome by charging a price at the
 - a. intersection of the marginal cost curve and the demand curve.
 - b. intersection of the average total cost curve and the demand curve.
 - c. minimum point on the average total cost curve.
 - d. intersection of the marginal cost curve and the marginal revenue curve.

16. Which of the following is the best example of rent-seeking?
 - a. A secretary takes finance courses in order to qualify for a job as a financial adviser.
 - b. An engineer volunteers for difficult jobs in order to convince his boss to raise his salary.
 - c. The owner of a bar offers a large selection of draft beers in order to attract more customers.
 - d. A student asks a professor to raise his grade in economics, because he is in danger of losing his financial-aid package.
17. Suppose the US has a comparative advantage in the production of computers with respect to Canada. As a result of free international trade, the US exports computers to Canada. What is the most likely outcome?
 - a. US consumers of computers are better off.
 - b. Everyone in both countries is better off.
 - c. Canadian consumers of computers are worse off.
 - d. Producer surplus in the US increases, and consumer surplus in the US decreases.

Scenario BRTD. Two firms, *A* and *B*, each produce the same product at $AC \equiv MC \equiv 1$. They each set prices: P_A and P_B . Prices can be anywhere between \$1 and \$51. If $P_A \neq P_B$, consumers buy 10 units from the low-price firm, and 0 from the high-price firm. If $P_A = P_B$, consumers buy 5 from each firm. The payoffs are the profits of each firm.

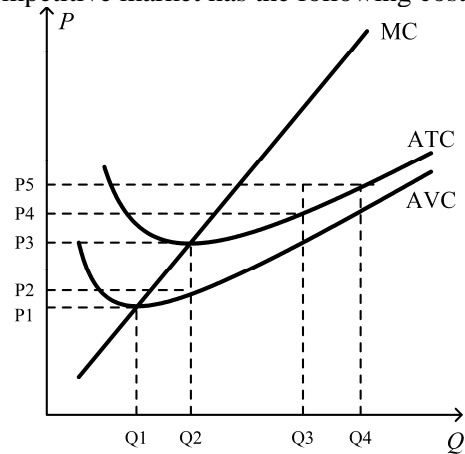
18. **See Scenario BRTD.** How much profit does *each* firm receive if both firms charge \$21 per unit.
 - a. \$100
 - b. 0
 - c. \$400
 - d. \$200
19. **See Scenario BRTD.** If both firms charge \$21 per unit, then
 - a. both firms will want to deviate.
 - b. only firm *B* will want to deviate.
 - c. neither firm will want to deviate.
 - d. only firm *A* will want to deviate.
20. **See Scenario BRTD.** Which of the following strategy profiles forms a Nash equilibrium?
 - a. both firms charge \$50
 - b. both firms charge \$1
 - c. firm *B* charges \$50 and *A* charges \$1
 - d. firm *A* charges \$50 and *B* charges \$1

Scenario DRN. The table below shows the payoffs to the running of positive and negative political advertisements by two candidates, a democrat and a republican. The payoffs represent the increase or decrease in the percentage of voters willing to vote for the candidate. Payoffs are displayed in the chart as **(Democrat's payoff, Republican's payoff)**.

		Republican	
		Positive	Negative
Democrat	Positive	(-4, +4)	(+3, -3)
	Negative	(+5, -5)	(-2, +2)

Note: "Positive advertisements" say good things about the candidate; "negative advertisements" say bad things about the candidate's opponent.

Figure FMC. Suppose a firm operating in a competitive market has the following cost curves:

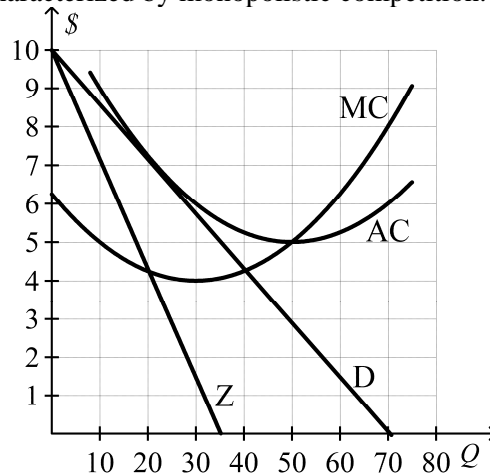


21. **See Scenario DRN.** For the Republican candidate, running a negative campaign is
 - a. a mixed strategy.
 - b. a dominated strategy.
 - c. a dominant strategy.
 - d. NONE of the above
22. **See Scenario DRN.** How many pure-strategy Nash Equilibrium(s) does this game?
 - a. 0
 - b. 1
 - c. 2
 - d. 4
23. **See Scenario DRN.** The Republican's best response to a positive ad is a _____ ad, and his best response to a negative ad is a _____ ad.
 - a. positive; negative
 - b. negative; positive
 - c. positive; positive
 - d. negative; negative
24. If the price elasticity of demand for a good is -4.0 , then a 10 percent increase in price results in a
 - a. 40 percent decrease in the quantity demanded.
 - b. 0.4 percent decrease in the quantity demanded.
 - c. 2.5 percent decrease in the quantity demanded.
 - d. 4 percent decrease in the quantity demanded.
25. In order to create capital goods, members of society must
 - a. save less.
 - b. pay taxes.
 - c. enroll in their companies' stock-option plans.
 - d. sacrifice current consumption.
26. **See Figure FMC.** When market price is P_3 , a profit-maximizing firm's total revenue
 - a. can be represented by the area $P_3 \times Q_3$.
 - b. can be represented by the area $P_3 \times Q_2$.
 - c. can be represented by the area $(P_3 - P_2) \times Q_3$.
 - d. is zero.
27. **See Figure FMC.** Firms will be encouraged to enter this market for all prices that exceed
 - a. P_1 .
 - b. P_2 .
 - c. P_3 .
 - d. None of the above is correct.
28. **See Figure FMC.** Firms will shut down in the short run if the market price
 - a. exceeds P_3 .
 - b. is less than P_1 .
 - c. is greater than P_1 but less than P_3 .
 - d. exceeds P_2 .
29. A natural monopoly occurs when
 - a. the firm is characterized by a rising marginal cost curve.
 - b. production requires the use of free natural resources, such as water or air.
 - c. the product is sold in its natural state (such as water or diamonds).
 - d. there are economies of scale over the relevant range of output.
30. Which of the following could be the cross-price elasticity of demand for two goods that are complements?
 - a. 0.2
 - b. 1.4
 - c. -1.3
 - d. 0

31. Negative externalities from a good create inefficiency, because
 - a. the price of the good will be too high.
 - b. production of the good involves private costs that are not opportunity costs.
 - c. demand for the good is extremely elastic.
 - d. too much of the good is produced and consumed.
32. The absolute value of the price elasticity of demand for a good will be relatively large when
 - a. there are no good substitutes available for the good.
 - b. the time period in question is relatively short.
 - c. expenditures on the good are a large part of a person's income.
 - d. ALL of the above are correct.
33. Drug companies are allowed to be monopolists in the drugs they discover in order to
 - a. allow drug companies to charge a price that is equal to their marginal cost.
 - b. encourage research.
 - c. allow the government to earn patent revenue.
 - d. discourage new firms from entering the drug market.
34. You paid \$9 to see a movie. Half an hour into the movie, you realize that it is a terrible movie and is not going to get any better. If you are rational in the economic sense, you should
 - a. stay until the end because you already paid for it.
 - b. leave immediately only if you can get a partial refund of the ticket price.
 - c. wait another half hour because spending \$9 for an hour is better than spending \$9 for half an hour.
 - d. leave immediately and do something more enjoyable.
35. If two price-taking firms compete by setting quantities of output, then
 - a. social surplus will be maximized.
 - b. they will produce the same amount of output as in perfect competition.
 - c. the market price will be greater than marginal cost.
 - d. marginal revenue is the same as the market price.
36. For competitive firms without fixed costs, an increasing marginal cost curve is the same as the
 - a. demand curve.
 - b. production-possibility curve.
 - c. supply curve.
 - d. None of the above

37. For markets to work well, there must be
 - a. voluntary exchange.
 - b. abundant, not scarce, resources.
 - c. a central planner.
 - d. market power.

Figure CMOP. This graph illustrates the condition of one firm in the long-run equilibrium of a market characterized by monopolistic competition.



38. **See Figure CMOP.** Line Z on the graph represents
 - a. average fixed cost
 - b. average variable cost
 - c. marginal revenue
 - d. NONE of the above
39. **See Figure CMOP.** This monopolistic competitor will produce ____ units and charge _____.
 - a. 40; 4.30
 - b. 20; 7.10
 - c. 35; 5.00
 - d. 50; 5.00
40. **See Figure CMOP.** The firm's profits are
 - a. 40
 - b. -105
 - c. 35
 - d. 0
41. Which is a likely outcome inside the United States of increased exports of manufactured goods?
 - a. Unemployment in the industrial sector.
 - b. Some manufacturing firms go out of business.
 - c. Producers of manufactured products lose surplus.
 - d. Consumers of manufactured products lose surplus.

Figure PFL.

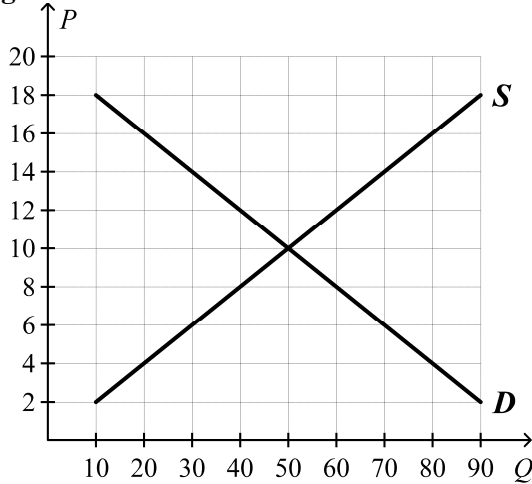
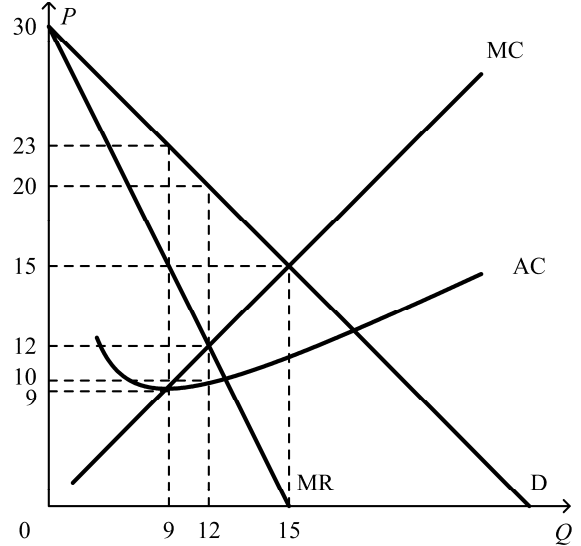


Figure MND. The graph below describes a profit-maximizing monopolist that cannot price-discriminate.

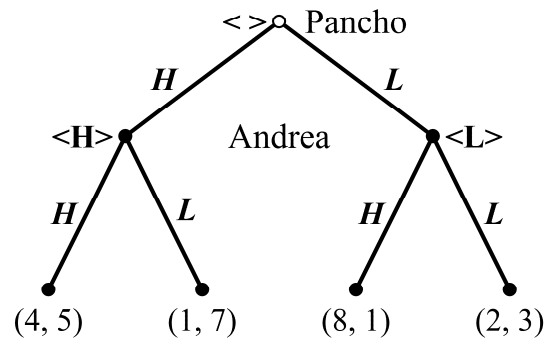


42. **See Figure PFL.** If the government imposes a price floor of \$14 in this market, the result would be
- an excess supply of 40.
 - an excess demand of 20.
 - an excess supply of 20.
 - an excess demand of 40.
43. **See Figure PFL.** If the government imposes a price ceiling of \$12 in this market, the result would be
- neither an excess demand nor an excess supply.
 - an excess supply of 20.
 - an excess demand of 20.
 - an excess supply of 10.
44. **See Figure PFL.** Which of the following cases would lead to nonprice rationing?
- A price ceiling is set at \$12.
 - A price ceiling is set at \$8.
 - A price floor is set at \$8.
 - A price floor is set at \$10.
45. Which of the following is NOT a social cost of bicycle theft?
- the cost of the thief's time
 - the inconvenience of having to leave bicycles in a safe place
 - the cost of bicycle locks
 - the value of stolen bicycles
46. In markets without rent-seeking, the payment of economic rents increases economic efficiency, because economic rents
- are a reward for hard work.
 - direct resources to the most productive use.
 - reward people for financial investments.
 - create jobs.
47. **See Figure MND.** In order to maximize profits, the monopolist should charge a price of
- \$9.
 - \$12.
 - \$20.
 - \$23.
48. **See Figure MND.** The monopolist would earn total revenues of
- \$81.
 - \$144.
 - \$225.
 - \$240.
49. **See Figure MND.** The monopolist would earn profits of
- \$96.
 - \$117.
 - \$120.
 - \$126.
50. The typical firm in the US economy
- is a monopoly.
 - sells its product for a price that is equal to the marginal cost of producing the last unit.
 - faces a downward sloping demand curve.
 - is perfectly competitive.

51. A monopolist can sell 200 units of output for \$36.00 per unit. Alternatively, it can sell 201 units of output for \$35.80 per unit. The marginal revenue of the 201st unit of output is
- \$-4.20.
 - \$35.80.
 - \$-0.20.
 - \$4.20.
52. If an externality is present in a market, economic efficiency may be enhanced by
- better informed market participants.
 - government intervention.
 - increased competition.
 - weakening property rights.
53. In game theory, a strategy is defined as
- any action that affects the players' payoffs.
 - the set of all actions that a given player is permitted to take.
 - an action chosen at random.
 - a plan that specifies an action for every situation that could be observed.
54. Governments are usually involved in cleaning city streets, because
- private firms would set high prices for the service.
 - there would be little competition among firms.
 - anyone can enjoy clean streets without having to pay for them.
 - street cleaning creates rent-seeking opportunities.
55. Suppose that demand decreases *and* supply decreases. What would you expect to occur in the market for the good?
- Both equilibrium price and equilibrium quantity would increase.
 - Equilibrium quantity would decrease, but the equilibrium price could change in either direction.
 - Equilibrium price would decrease, but the equilibrium quantity could change in either direction.
 - Equilibrium price would increase, but the equilibrium quantity could change in either direction.
56. If the price of salt increases, then
- the income effect will be large, because salt is a necessity.
 - the income effect will be small, because salt is a small part of the consumer budget.
 - the income effect will be equal and opposite the substitution effect.
 - the demand curve for salt will shift to the left.

57. A market demand curve specifies
- what price sellers will set.
 - the quantity purchased.
 - how much all consumers would want to buy at various prices.
 - the determinants of individual demand.

Scenario HSX. Pancho and Andrea each owns a jewelry store that sells precious emeralds. The two stores compete with each other. Each owner has to choose from two prices: a high price (H) or a low price (L). Pancho has promised to announce his price on Tuesday. Andrea will see what price Pancho announces, and then announce her own price the next morning. The following chart represents the actions of the two owners. Profits for each store are in parenthesis: (*Pancho's profits, Andrea's profits*).



58. **See Scenario HSX.** Pancho must choose a strategy from a set of ____ possible strategies; Andrea must choose a strategy from a set of ____ possible strategies.
- 2; 4
 - 2; 2
 - 4; 2
 - 4; 4
59. **See Scenario HSX.** Which *strategy* will Andrea adopt in subgame-perfect Nash equilibrium?
- always charge a high price
 - charge the same price as Pancho
 - charge a high price when Pancho charges a low price, and *vice versa*.
 - always charge a low price
60. **See Scenario HSX.** Which *strategy* will Pancho adopt in subgame-perfect Nash equilibrium?
- charge the same price as Andrea
 - charge a low price
 - charge a high price
 - charge a high price when Andrea charges a low price, and *vice versa*.

Answer Section

MULTIPLE CHOICE

1. ANS: D	REF: PF16-1	45. ANS: D	REF: PF16-45
2. ANS: A	REF: PF16-2	46. ANS: B	REF: PF16-46
3. ANS: D	REF: PF16-3	47. ANS: C	REF: PF16-47
4. ANS: C	REF: PF16-36	48. ANS: D	REF: PF16-48
5. ANS: C	REF: PF16-5	49. ANS: C	REF: PF16-49
6. ANS: B	REF: PF16-6	50. ANS: C	REF: PF16-66
7. ANS: D	REF: PF16-7	51. ANS: A	REF: PF16-51
8. ANS: C	REF: PF16-8	52. ANS: B	REF: PF16-52
9. ANS: C	REF: PF16-9	53. ANS: D	REF: PF16-67
10. ANS: D	REF: PF16-10	54. ANS: C	REF: PF16-54
11. ANS: D	REF: PF16-62	55. ANS: B	REF: PF16-41
12. ANS: A	REF: PF16-12	56. ANS: B	REF: PF16-56
13. ANS: A	REF: PF16-13	57. ANS: C	REF: PF16-57
14. ANS: A	REF: PF16-14	58. ANS: A	REF: PF16-58
15. ANS: A	REF: PF16-15	59. ANS: D	REF: PF16-59
16. ANS: D	REF: PF16-16	60. ANS: B	REF: PF16-60
17. ANS: D	REF: PF16-63		
18. ANS: A	REF: PF16-18		
19. ANS: A	REF: PF16-19		
20. ANS: B	REF: PF16-20		
21. ANS: D	REF: PF16-22		
22. ANS: A	REF: PF16-23		
23. ANS: A	REF: PF16-24		
24. ANS: A	REF: PF16-25		
25. ANS: D	REF: PF16-21		
26. ANS: B	REF: PF16-27		
27. ANS: C	REF: PF16-28		
28. ANS: B	REF: PF16-29		
29. ANS: D	REF: PF16-30		
30. ANS: C	REF: PF16-64		
31. ANS: D	REF: PF16-65		
32. ANS: C	REF: PF16-32		
33. ANS: B	REF: PF16-33		
34. ANS: D	REF: PF16-34		
35. ANS: C	REF: PF16-55		
36. ANS: C	REF: PF16-61		
37. ANS: A	REF: PF16-37		
38. ANS: C	REF: PF16-38		
39. ANS: B	REF: PF16-39		
40. ANS: D	REF: PF16-40		
41. ANS: D	REF: PF16-35		
42. ANS: A	REF: PF16-42		
43. ANS: A	REF: PF16-43		
44. ANS: B	REF: PF16-44		