

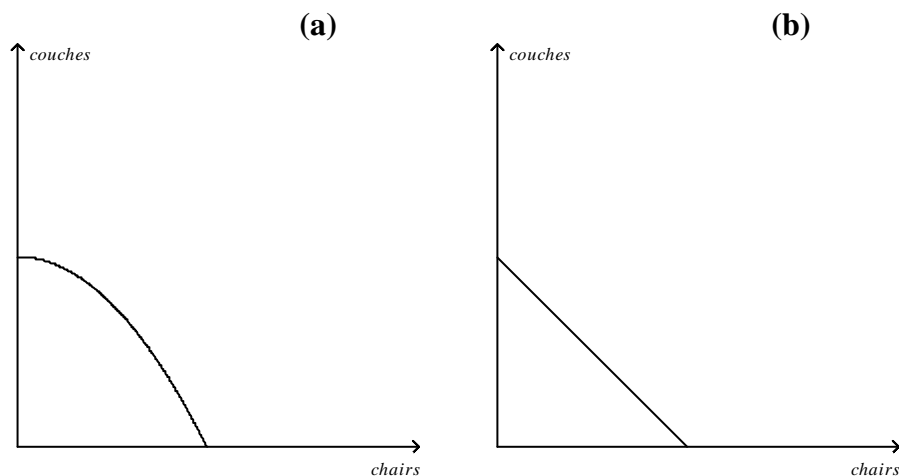
Name (given name then surname) _____

TA Name _____

Final exam. Look over the whole test before you begin. Good luck!

The exam has 62 multiple choice question at 5 pts each, and two longer questions for 25 points each.

1. Look at these two PPFs.



In just one of these economies, resources are specialized, that is some resources are especially good at producing one of the two goods. That economy is depicted in:

- a. Panel (a).
- b. Panel (b).
- c. both Panel (a) and Panel (b).
- d. neither Panel (a) nor Panel (b).
- e. I cannot tell from these figures.

2. Consider two goods, A and B. For good A, $Q_D = 12 + 2P_A - 3P_B$

From this equation, you know that goods A and B are:

- a. normal goods
- b. inferior goods
- c. complements
- d. substitutes
- e. neither complements nor substitutes

Table for questions 3-6. Assume that England and Spain can switch between producing cheese and producing bread at a constant rate.

	produced from one hour labor		Opportunity cost of	
	Cheese	Bread	Cheese	Bread
d	1	1/4	1/4 breads	4 cheeses
	1/4	1/8	1/2 breads	2 cheeses

3. We could use the information in the table to draw a production possibilities frontier for England and a second production possibilities frontier for Spain. If we were to do this, measuring bread along the horizontal axis, then

- a. the slope of England's production possibilities frontier would be -4 and the slope of Spain's production possibilities frontier would be -2.
- b. the slope of England's production possibilities frontier would be -1 and the slope of Spain's production possibilities frontier would be -1/4.
- c. the slope of England's production possibilities frontier would be -1/4 and the slope of Spain's production possibilities frontier would be -1/2.
- d. the slope of England's production possibilities frontier would be -1/2 and the slope of Spain's production possibilities frontier would be -1/4.
- e. None of the above

4. England has an absolute advantage in the production of

- a. cheese and Spain has an absolute advantage in the production of bread.
- b. bread and Spain has an absolute advantage in the production of cheese.
- c. both goods and Spain has an absolute advantage in the production of neither good.
- d. neither good and Spain has an absolute advantage in the production of both goods.

5. England should specialize in the production of

- a. bread and Spain should specialize in the production of cheese.
- b. cheese and Spain should specialize in the production of bread.
- c. both goods and Spain should specialize in the production of neither good.
- d. neither good and Spain should specialize in the production of both goods.

6. Which of the following deals will allow both England and Spain to gain from trade?

- a. Spain gives England 1 bread for 3 cheeses; thus each cheese costs Spain 1/3 of a bread.
- b. Spain gives England 1 bread for 5 cheese; thus each cheese costs Spain 1/5 of a bread.
- c. Spain gives England 1 bread for 4 cheeses; thus each cheese costs Spain 1/4 of a bread.
- d. England gives Spain 1 bread for 3 cheeses; thus each cheese costs England 1/3 of a bread.
- e. None of the above.

7. For good A, $Q^S = 12 + 2P$ $Q^D = 24 - 4P$

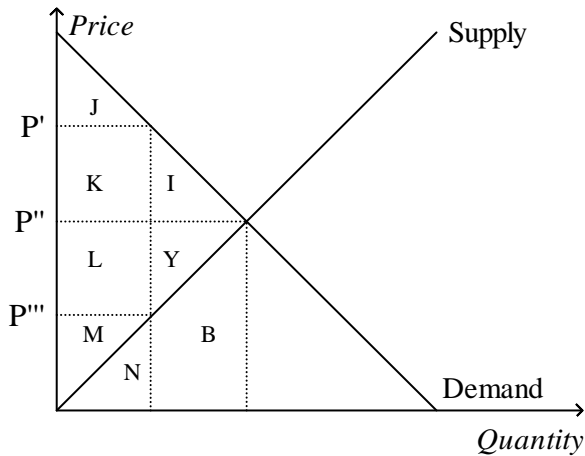
What are the equilibrium price and quantity of good A?

- a. $P^* = 4$, $Q^* = 18$
- b. $P^* = 2$, $Q^* = 16$
- c. $P^* = 2$, $Q^* = 12$
- d. $P^* = 6$, $Q^* = 10$
- e. I do not have enough information to answer this question

8. When the price of a good is \$5, the quantity demanded is 100 units per month; when the price is \$7, the quantity demanded is 80 units per month. Using the midpoint method, the price elasticity of demand is:

- a. $3/2$ b. $2/3$ c. 2 d. 3 e. None of the above

For 9.-12.



Suppose the government imposes a tax of $P' - P'''$, paid by buyers.

9. The imposition of the tax will cause the price to:

- a. increase by the amount of the tax
b. increase by less than the amount of the tax
c. decrease by the amount of the tax
d. decrease by less than the amount of the tax

10. The tax revenue is measured by the area

- a. $K+L$. b. $I+Y$. c. $J+K+L+M$. d. $I+J+K+L+M+Y$.

11. Consumer surplus after the tax is measured by the area

- a. J b. J+K c. J+K+L d. M e. L+M

12. Producer surplus after the tax is measured by the area

- a. J b. J+K c. J+K+L d. M e. L+M

13. Which of the following observations would be consistent with the imposition of a binding price floor on a market?

After the price floor becomes effective,

- a. a larger quantity of the good is bought and sold.
b. a larger quantity of the good is demanded.
c. a smaller quantity of the good is bought and sold.
d. the price is lower than in the previous equilibrium.
e. none of the above

14. If the market for lemons is perfectly competitive and the lemon demand curve is nearly vertical, a tax on lemons

- a. has a large deadweight loss.
- b. raises a small amount of tax revenue.
- c. has little impact on the amount of lemons that is produced and sold.
- d. results in a large tax burden on the firms that produce lemons.

15. Average *variable* cost is increasing whenever

- a. variable cost is increasing.
- b. marginal cost is increasing.
- c. marginal cost is less than average variable cost.
- d. marginal cost is greater than average variable cost.
- e. none of the above

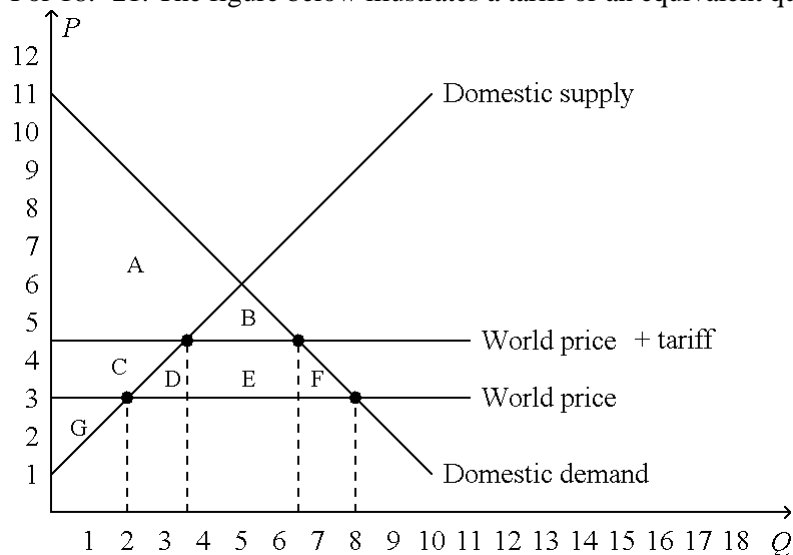
16. What does it mean if a firm experiences decreasing returns to scale?

- a. Adding another worker to the labor force always increases output, but the increment to production from an additional worker gets smaller and smaller as more workers are added
- b. Doubling the quantity of variable inputs results in less than twice as much output
- c. Doubling the quantity of all inputs, including fixed inputs, results in less than twice as much output
- d. Doubling the quantity of all inputs, including fixed inputs, results in twice as much output
- e. Doubling the quantity of all inputs, including fixed inputs, results in more than twice as much output

17. What does it mean if a firm experiences increasing returns to scale?

- a. Adding another worker to the labor force always increases output, and the increment to production from an additional worker gets bigger and bigger as more workers are added
- b. Doubling the quantity of variable inputs results in less than twice as much output
- c. Doubling the quantity of all inputs, including fixed inputs, results in less than twice as much output
- d. Doubling the quantity of all inputs, including fixed inputs, results in twice as much output
- e. Doubling the quantity of all inputs, including fixed inputs, results in more than twice as much output

For 18.- 21. The figure below illustrates a tariff or an equivalent quota.



18. Under autarky, what is the quantity produced and sold?

- a. 5 b. 2 c. 3 and 1/2 d. 6 and 1/2 e. 8

19. Under free trade, what is the quantity purchased by domestic buyers?

- a. 5 b. 2 c. 3 and 1/2 d. 6 and 1/2 e. 8

20. With an equivalent quota, what is the quantity of imports?

- a. 1 and 1/2 b. 2 c. 3 d. 4 and 1/2 e. 6

21. Suppose the tariff is replaced by an equivalent quota. What happens to total surplus?

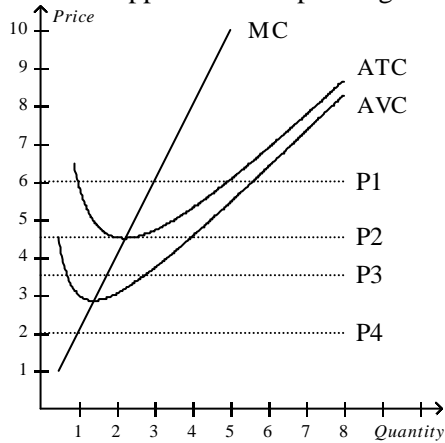
- a. Increases by E
b. Increases by D+E+F
c. Decreases by E
d. Decreases by D+E+F
e. Does not change

22. A firm in a perfectly competitive market that shuts down has to pay

- a. its variable costs but not its fixed costs.
b. its fixed costs but not its variable costs.
c. both its variable costs and its fixed costs.
d. neither its variable costs nor its fixed costs.

23. When firms have an incentive to exit a competitive market, their exit will
- lower the market price.
 - necessarily raise the costs for the firms that remain in the market.
 - raise the profits of the firms that remain in the market.
 - shift the demand for the product to the left.

For 24-27. Suppose a firm operating in a perfectly competitive market has the following cost curves:



24. If the market price is P1, in the short run the firm will earn
- positive economic profits.
 - negative economic profits but will try to remain open.
 - negative economic profits and will shut down.
 - zero economic profits.
25. If the market price is P2, in the short run the firm will earn
- positive economic profits.
 - negative economic profits but will try to remain open.
 - negative economic profits and will shut down.
 - zero economic profits.
26. If the market price is P3, in the short run the firm will earn
- positive economic profits.
 - negative economic profits but will try to remain open.
 - negative economic profits and will shut down.
 - zero economic profits.
27. If the market price is P4, in the short run the firm will earn
- positive economic profits.
 - negative economic profits but will try to remain open.
 - negative economic profits and will shut down.
 - zero economic profits.

For 28. and 29. As part of an estate settlement Mary received \$1 million. She decided to use the money to purchase a small business in Anywhere, USA. Her business operates in a perfectly competitive industry. If Mary would have invested the \$1 million in a risk-free bond fund she could have earned \$100,000 each year. She also quit her job with Lucky.Com Inc. to devote all of her time to her new business. Her salary at Lucky.Com Inc. was \$75,000 per year.

28. What are Mary's opportunity costs of operating her new business?

- a. \$25,000 b. \$75,000 c. \$100,000 d. \$175,000 e. None of the above

29. How large would Mary's accounting profits need to be to allow her to attain zero economic profit?

- a. \$100,000 b. \$125,000 c. \$175,000 d. \$225,000 e. \$300,000

30. Consider a perfectly competitive industry with a large number of identical firms. Entry of firms into this industry has no effect on the costs of industry inputs. In this market, an increase in demand will

- a. increase price in the short run but not in the long run.
- b. increase price in the long run but not in the short run.
- c. increase price both in the short and the long run.
- d. not affect price in either the short or the long run.

31. In a perfectly competitive market, in long run the market supply curve

- a. must always be horizontal.
- b. could be upward sloping if the cost of production falls as new firms enter the market.
- c. could be upward sloping if the cost of production rises as new firms enter the market.
- d. could be upward sloping if technological improvements lower the cost of producing in the market.

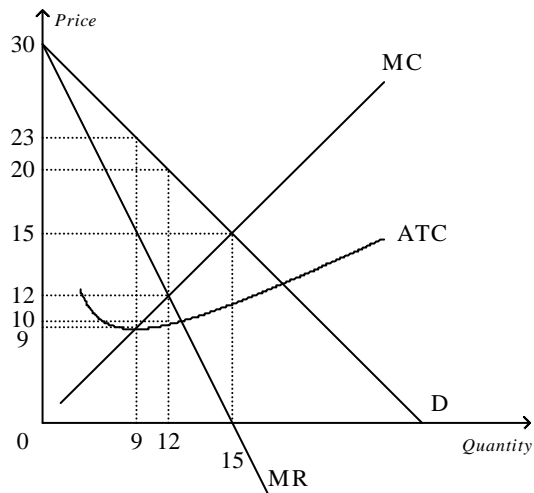
32. The fundamental source of monopoly power is

- a. barriers to entry.
- b. profit.
- c. increasing average total cost.
- d. a product without close substitutes.
- e. None of the above

33. If the monopolist's linear demand curve intersects the quantity axis at $Q = 30$, then the monopolist's marginal revenue will be equal to zero at

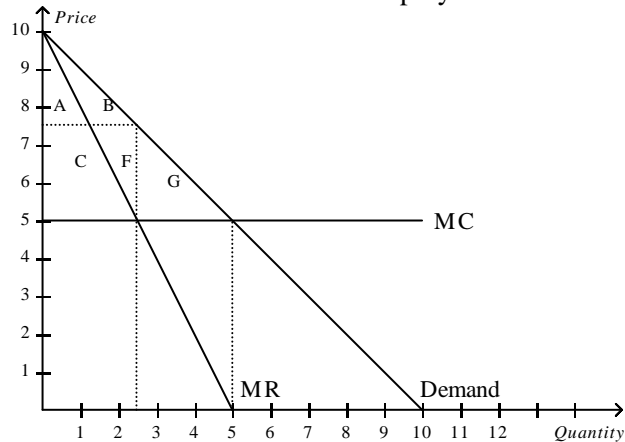
- a. $Q = 10$.
- b. $Q = 15$.
- c. $Q = 20$.
- d. $Q = 30$.

34. The curves below are for a monopoly firm.



In order to maximize profits, the monopolist should produce
a. 9 units. b. 12 units. c. 15 units. d. more than 15 units.

35. The curves below are for a monopoly firm's market.



Which area represents the deadweight loss from monopoly?

a. A+B b. C+F c. G d. A+B+C+F e. None of the above

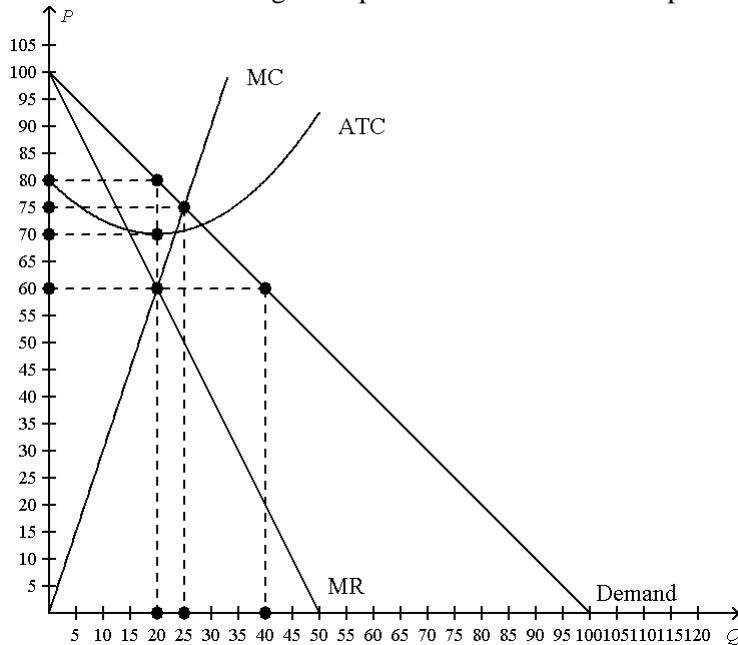
36. If government regulation sets the maximum price for a natural monopoly equal to its marginal cost, then the natural monopolist will

a. earn economic losses.
b. earn economic profits.
c. earn zero economic profits.
d. produce a lower quantity of output than is socially optimal.

37. Which of the following statements about monopolistic competition is not correct?

- a. Monopolistic competition is similar to monopoly because in each market structure the firm can charge a price above marginal costs.
- b. Monopolistic competition is similar to perfect competition because both market structures are characterized by free entry.
- c. Monopolistic competition is similar to oligopoly because both market structures are characterized by barriers to entry.
- d. Monopolistic competition is similar to perfect competition because both market structures are characterized by many sellers.

For 38. and 39. This figure depicts a situation in a monopolistically competitive market.



38. What price will the monopolistically competitive firm charge in this market?

- a. \$60
- b. \$70
- c. \$75
- d. \$80

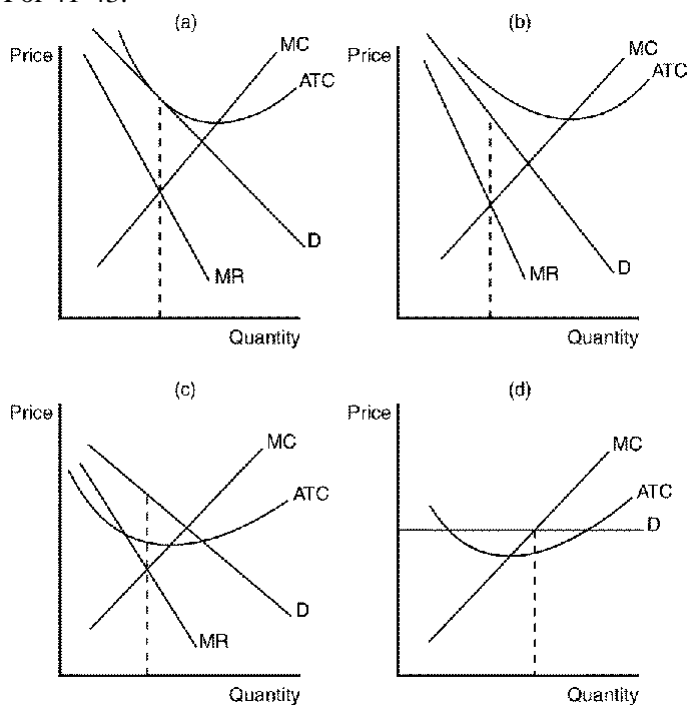
39. Which of the following will occur in the long run in this industry?

- a. Firms will exit this industry.
- b. Firms will enter this industry.
- c. This firm will continue to earn positive economic profits.
- d. This firm will earn less than zero economic profits.

40. As new firms enter a monopolistically competitive market, profits of existing firms

- a. rise, and product diversity in the market increases.
- b. rise, and product diversity in the market decreases.
- c. decline, and product diversity in the market increases.
- d. decline, and product diversity in the market decreases.

For 41-43.



41. Which of the graphs depicts a short-run equilibrium that will encourage the entry of other firms into a monopolistically competitive industry?

- a. panel a b. panel b c. panel c d. panel d

42. Which of the graphs depicts a short-run equilibrium that will encourage the exit of some firms from a monopolistically competitive industry?

- a. panel a b. panel b c. panel c d. panel d

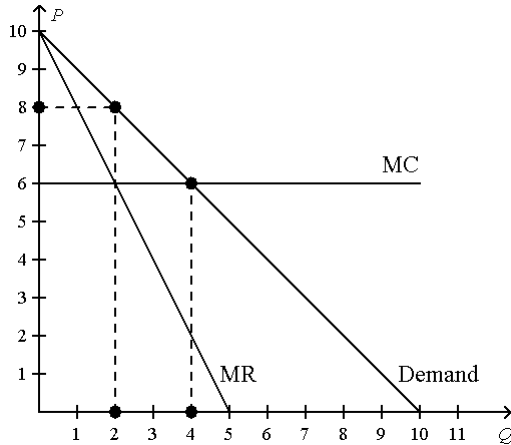
43. Which of the graphs depicts a short-run equilibrium that will not encourage either the entry or exit of firms in a monopolistically competitive industry?

- a. panel a b. panel b c. panel c d. panel d

44. When computing the opportunity cost of attending a concert you should include

- the price you pay for the ticket and the value of your best alternative activity.
- the price you pay for the ticket, but not the value of your best alternative activity
- the value of your best alternative activity, but not the price you pay for the ticket.
- neither the price of the ticket nor the value of your best alternative activity.

For 45.-47.



Suppose this market is served by a duopoly in which each firm faces the marginal cost curve shown in the diagram. The marginal revenue curve that a monopolist would face in this market is also shown.

45. Suppose the firms are able to collude successfully and act as a cartel. Then:

- the total output will be 2 units and the price will be \$6.00 per unit.
- the total output will be 2 units and the price will be \$8.00 per unit.
- the total output will be 4 units and the price will be \$6.00 per unit.
- the total output will be somewhere between 2 and 4 units, and the price will be somewhere between \$6.00 and \$8.00 per unit.

46. Suppose the firms are unable to collude successfully. Each firm sets a price, taking as given the price set by the other firm, and the firm with the lower price takes all of the market share. Then:

- the total output will be 2 units and the price will be \$6.00 per unit.
- the total output will be 2 units and the price will be \$8.00 per unit.
- the total output will be 4 units and the price will be \$6.00 per unit.
- the total output will be somewhere between 2 and 4 units, and the price will be somewhere between \$6.00 and \$8.00 per unit.

47. Suppose the firms are unable to collude successfully. Each firm sets a quantity, taking as given the quantity set by the other firm, and the price adjusts to clear the market given the total quantity. Then:

- the total output will be 2 units and the price will be \$6.00 per unit.
- the total output will be 2 units and the price will be \$8.00 per unit.
- the total output will be 4 units and the price will be \$6.00 per unit.
- the total output will be somewhere between 2 and 4 units, and the price will be somewhere between \$6.00 and \$8.00 per unit.

48. Private solutions may not be possible due to the costs of negotiating and enforcing these solutions. Such costs are called

- transaction costs.
- corrective costs.
- input costs.
- private costs.

49. Hector and Bart are roommates. Each person has to decide whether to take part in cleaning their apartment. Either the apartment will be completely clean (if one or both roommates take part in cleaning), or it will remain dirty (if neither roommate cleans). With happiness measured on a scale of 1 (very unhappy) to 10 (very happy), the possible outcomes are as follows:

		Hector's Decision	
		Clean	Don't clean
Bart's Decision	Clean	<p>Hector's happiness = 6</p> <p>Bart's happiness = 7</p>	<p>Hector's happiness = 10</p> <p>Bart's happiness = 2</p>
	Don't clean	<p>Hector's happiness = 2</p> <p>Bart's happiness = 10</p>	<p>Hector's happiness = 5</p> <p>Bart's happiness = 4</p>

The Nash equilibrium is that

- a. Hector and Bart both clean. b. Hector cleans and Bart does not clean. c. Bart cleans and Hector does not clean.
d. neither Hector nor Bart cleans.

50. When the player in a game will adopt the same strategy no matter what she thinks the other players will do, that is called a:

- a. Nash equilibrium
b. Dominant strategy
c. Two-by-two matrix
d. Prisoner's dilemma
e. None of the above

51. Mary and Cathy are roommates. Mary assigns a \$30 value to smoking cigarettes. Cathy values smoke-free air at \$15. Which of the following scenarios is a successful example of the Coase theorem?

- a. Cathy offers Mary \$20 not to smoke. Mary accepts and does not smoke.
b. Mary pays Cathy \$16 so that Mary can smoke.
c. Mary pays Cathy \$14 so that Mary can smoke.
d. Cathy offers Mary \$15 not to smoke. Mary accepts and does not smoke.

52. Monte owns a dog; the dog's barking annoys Monte's neighbor, Teresa. Suppose that the benefit of owning the dog is worth \$200 to Monte and that Teresa bears a cost of \$400 from the barking. Assuming Monte has the legal right to keep the dog, a possible private solution to this problem is that

- a. Teresa pays Monte \$150 to give the dog to his parents who live on an isolated farm.
b. Monte pays Teresa \$350 for her inconvenience.
c. Teresa pays Monte \$300 to give the dog to his parents who live on an isolated farm.
d. There is no private transaction that would improve this situation.

53. Katie and Taylor are roommates. On a particular day, their lawn needs to be mowed. Each person has to decide whether to take part in mowing the lawn. At the end of the day, either the lawn will be mowed (if one or both roommates take part in mowing), or it will remain unmowed (if neither roommate mows). With happiness measured on a scale of 1 (very unhappy) to 10 (very happy), the possible outcomes are as follows:

		Katie's Decision	
		Mow	Don't mow
Taylor's Decision	Mow	Katie's happiness = 7 Taylor's happiness = 7	Katie's happiness = 10 Taylor's happiness = 2
	Don't mow	Katie's happiness = 5 Taylor's happiness = 8	Katie's happiness = 4 Taylor's happiness = 4

The Nash equilibrium is that

- a. Katie and Taylor both mow.
- b. Katie mows and Taylor does not mow.
- c. Taylor mows and Katie does not mow.
- d. All of the above outcomes are equally likely.

54. A "public good" is

- a. neither excludable nor rival in consumption
- b. both excludable and rival in consumption
- c. excludable, but not rival in consumption
- d. rival in consumption, but not excludable

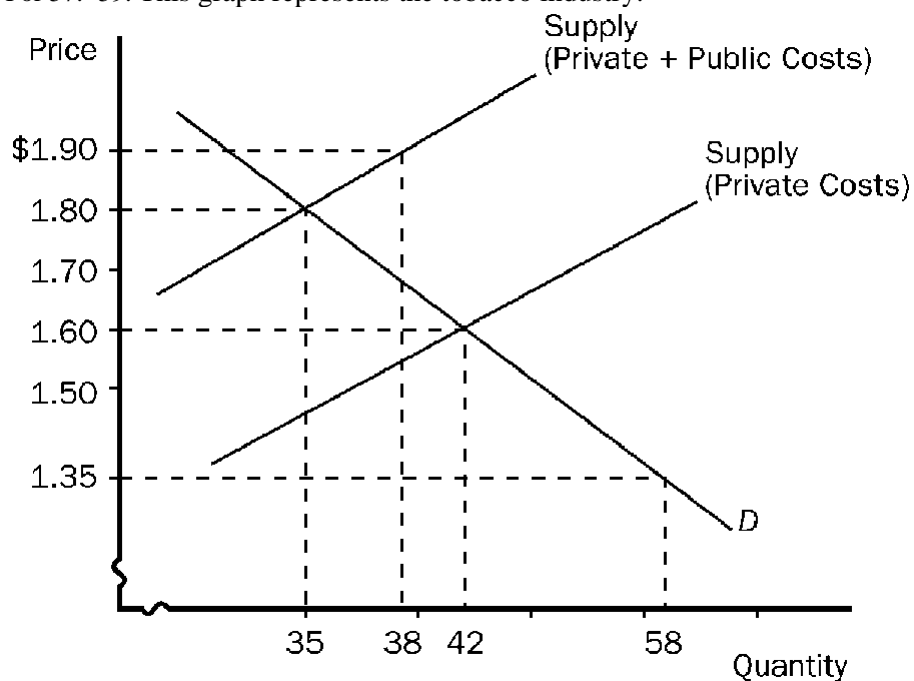
55. A "club good" is

- a. neither excludable nor rival in consumption
- b. both excludable and rival in consumption
- c. excludable, but not rival in consumption
- d. rival in consumption, but not excludable

56. A "common good" is

- a. neither excludable nor rival in consumption
- b. both excludable and rival in consumption
- c. excludable, but not rival in consumption
- d. rival in consumption, but not excludable

For 57.- 59. This graph represents the tobacco industry.



57. The industry creates
a. positive externalities. b. negative externalities. c. no externalities. d. no equilibrium in the market.

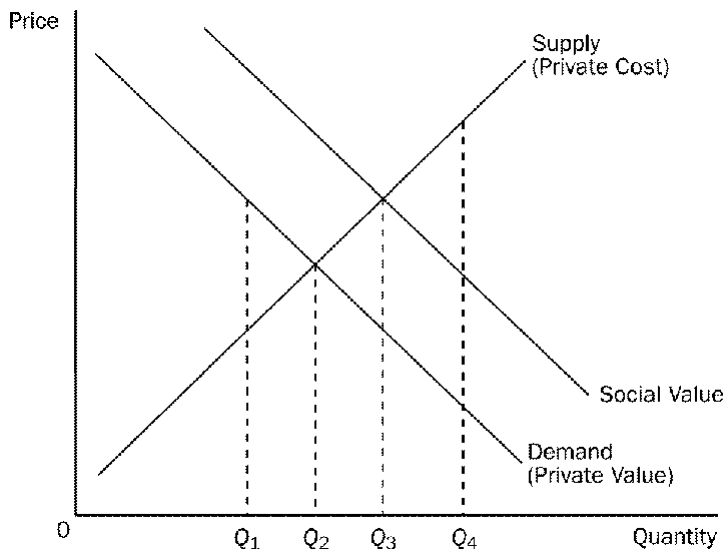
58. Without any government intervention, the equilibrium price and quantity are

- a. \$1.90 and 38 units, respectively.
- b. \$1.80 and 35 units, respectively.
- c. \$1.60 and 42 units, respectively.
- d. \$1.35 and 58 units, respectively.

59. The socially optimal (i.e., maximizes total surplus) price and quantity are

- a. \$1.90 and 38 units, respectively.
- b. \$1.80 and 35 units, respectively.
- c. \$1.60 and 42 units, respectively.
- d. \$1.35 and 58 units, respectively.

For 60.-61.



60. Which quantity represents the social optimum for this market?

- a. Q_1 . b. Q_2 . c. Q_3 . d. Q_4 .

61. To internalize the externality in this market, the government should

- a. impose a tax on this product.
b. provide a subsidy for this product.
c. forbid production.
d. regulate the market with average-cost pricing.

62. The "tragedy of the commons" can occur

- a. whenever a good is neither excludable nor rival in consumption
b. whenever a good is both excludable and rival in consumption
c. whenever a good is excludable, but not rival in consumption
d. whenever a good is rival in consumption, but not excludable
e. none of the above

Longer questions.

I) Consider a perfectly competitive market with no externalities of any kind. Suppose the government begins to pay a subsidy to producers equal to $\$Z$ - that is, for every unit produced, the government pays the producer of that unit $\$Z$. The producer also receives the price paid for the unit by buyers. On a graph, draw that situation. Mark the price and quantity prevailing before the subsidy as P_1 and Q_1 . Mark the price and quantity prevailing after the subsidy as P_2 and Q_2 .

Shade in the area that represents the deadweight loss created by the subsidy.

II) What is the difference between a policy that is a Pareto Improvement, and a policy that is a Potential Pareto Improvement? Use full sentences with *no errors in spelling or grammar*. You might want to do a first draft on the scratch paper. Be as brief as possible. Do *not* give an example.