McMaster University
Department of Economics

ECON 1B03
Midterm Test #2

VERSION 1

Instructor: Professor H Holmes
Duration: 2 hours
Total Number of Pages: 14

INSTRUCTIONS:

Answer all questions on the scan sheets. USE AN HB PENCIL ONLY. Make sure you carefully fill in the bubbles. YOU MUST FILL IN YOUR STUDENT NUMBER, AND VERSION NUMBER ON THE SCAN SHEET OR YOUR GRADE WILL NOT BE RECORDED.

You may use the Casio FX calculator.

Hand in the scan sheet and this test copy.

TOTAL MARKS AVAILABLE: 50

NAME:_____

STUDENT #: _____

MUGSI ID: _____

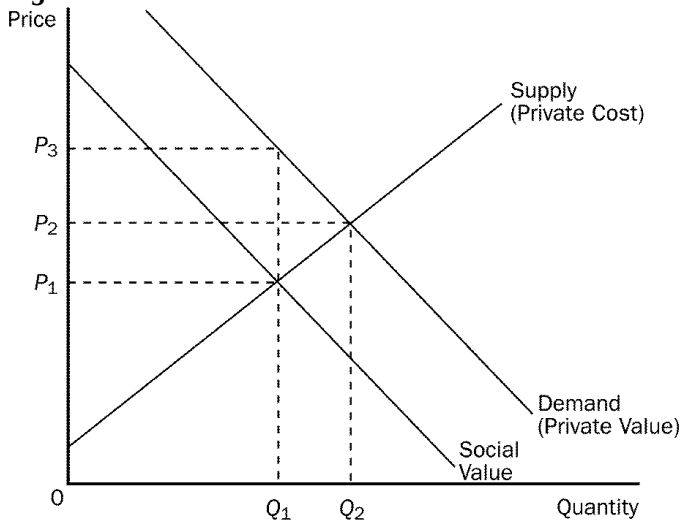
SECTION**:** Circle One: 9:30-10:20 11:30-12:20 Wednesday Night

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

____ 1. Externalities cause markets to
a. fail to allocate resources efficiently.
b. cause price to be different than the equilibrium price.
c. benefit producers at the expense of consumers.
d. cause markets to operate more equitably.

____ 2. When negative externalities are present in a market
a. producers will be affected, but not consumers.
b. overproduction will occur.
c. demand will be too high.
d. the market will still maximize total benefits.

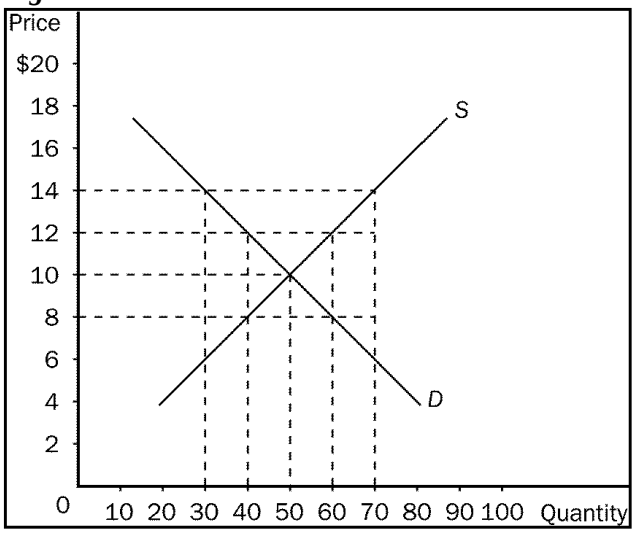
Figure 1



____ 3. **Refer to Figure 1.** Which price and quantity combination represents the social optimum for this market?
a. P_1 and Q_1.
b. P_2 and Q_2.
c. P_2 and Q_1.
d. P_3 and Q_1.

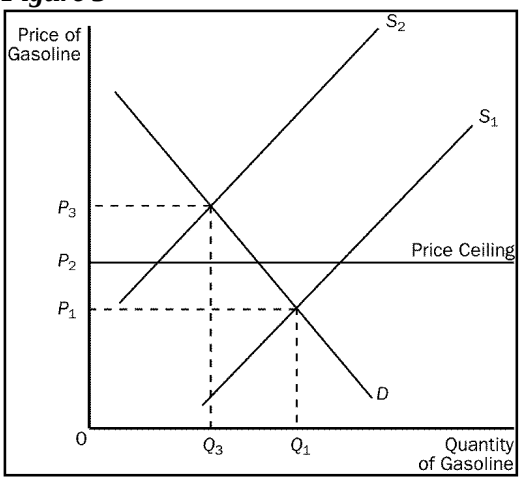
____ 4. Which of the following is true of the Coase theorem?
a. Interested parties can reach an outcome in which everyone is better off.
b. The outcome reached will be inefficient.
c. Interested parties will need an arbitrator in order to reach an agreement that is efficient.
d. None of the above is correct.

Figure 2



____ 5. **Refer to Figure 2**. If the government imposes a binding price floor of $14.00 in this market, the result would be a
   a. surplus of 20.
   b. surplus of 40.
   c. shortage of 20.
   d. shortage of 40.

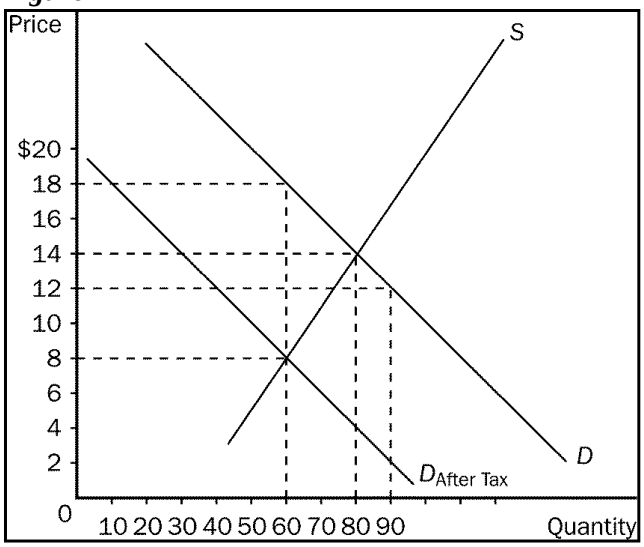
Figure 3



____ 6. **Refer to Figure 3**. With a price ceiling present in this market, when the supply curve for gasoline shifts from S1 to S2
   a. the price will increase to P3.
   b. a surplus will occur at the new market price of P2.
   c. the market price will stay at P1 due to the price ceiling.
   d. a shortage will occur at the price ceiling of P2.

____ 7. Assume that the demand and supply curves for cars are elastic. If the government imposed a $500 tax on the buyer of each car, we can assume that the
   a. equilibrium price of a car would decrease by less than $500.
   b. price of a car would decrease by exactly $500.
   c. price of a car would decrease by more than $500.
   d. price of a car would not change if both curves were elastic.

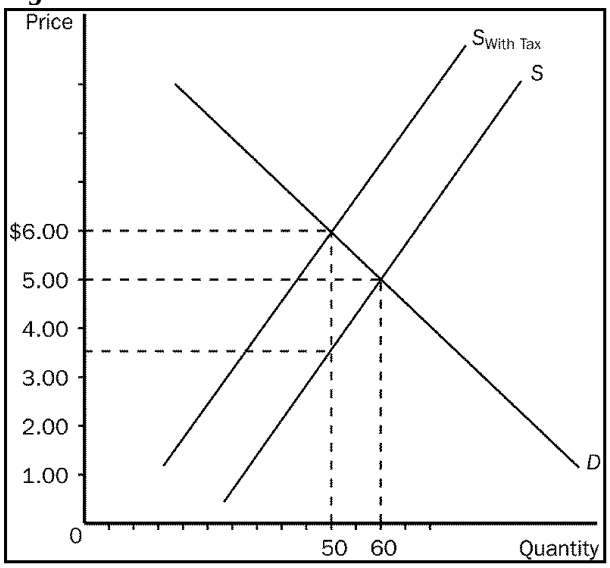
Figure 4



____ 8. **Refer to Figure 4**. The price sellers receive after the tax is imposed is
   a. $18.00.
   b. $14.00.
   c. $12.00.
   d. $8.00.

____ 9. **Refer to Figure 4**. The amount of the tax that buyers would pay would be
   a. $10.00.
   b. $6.00.
   c. $4.00.
   d. $2.00.

Figure 5

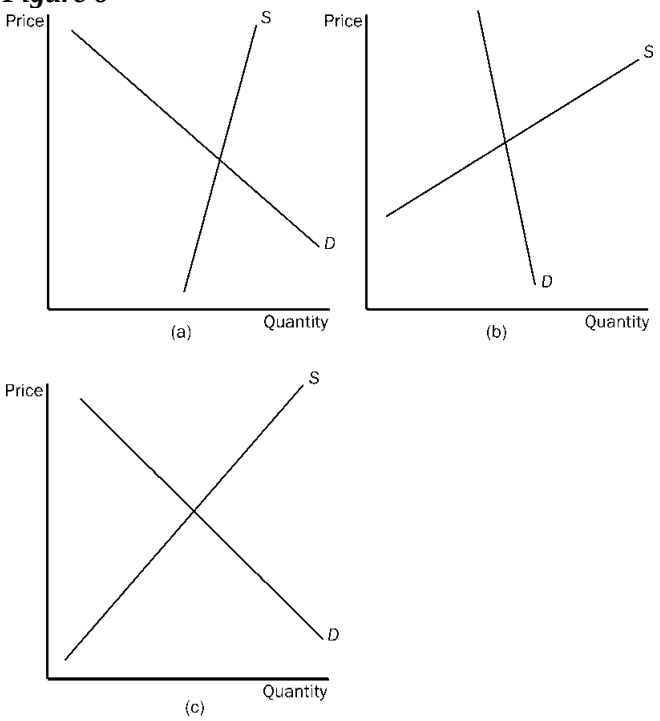


____ 10. **Refer to Figure 5**. The price sellers receive after the tax is imposed is
a. $1.00.
b. $3.50.
c. $5.00.
d. $6.00.

____ 11. **Refer to Figure 5**. The amount of the tax that sellers would pay would be
a. $1.00.
b. $1.50.
c. $2.50.
d. $3.00.

Continued on the next page…

Figure 6

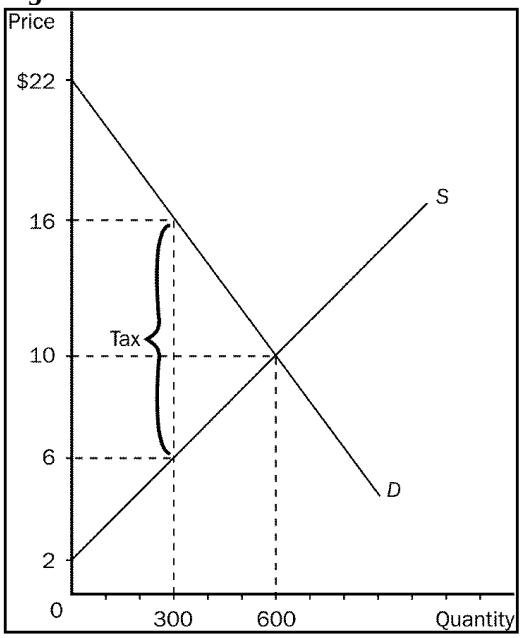


____ 12. **Refer to Figure 6**. In which market will the majority of a tax be paid by the buyer?
a. market (a)
b. market (b)
c. market (c)
d. All of the above are correct.

____ 13. If a tax is imposed on a market with inelastic demand and elastic supply,
a. buyers will bear most of the burden of the tax.
b. sellers will bear most of the burden of the tax.
c. the burden of the tax will be shared equally between buyers and sellers.
d. it is impossible to determine how the burden of the tax will be shared.

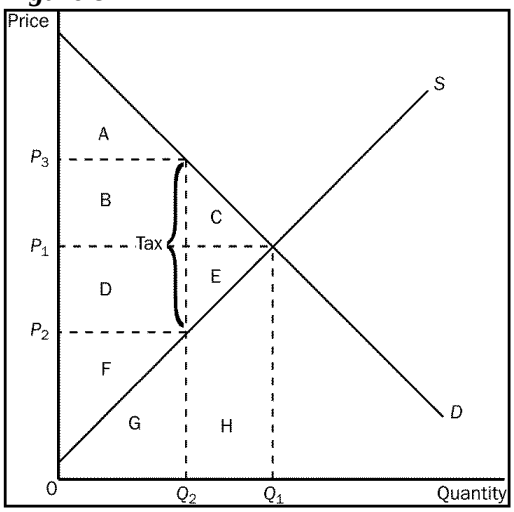
____ 14. When evaluating the size of the deadweight loss due to a tax we know that the
a. greater the elasticities of supply and demand, the greater the deadweight loss.
b. smaller the elasticities of supply and demand, the greater the deadweight loss.
c. smaller the decrease in both quantity demanded and quantity supplied, the greater the deadweight loss.
d. primary factor that determines the size of the deadweight loss in the percentage the tax is of price.

Figure 7



____ 15. **Refer to Figure 7**. The deadweight loss in this market as a result of a tax would be
a. $600.
b. $900.
c. $1500.
d. $1800.

Figure 8



____ 16. **Refer to Figure 8**. After the tax is levied, consumer surplus is represented by area
a. A
b. A + B + C
c. D + E + F
d. F

____ 17. Market demand is given by Qd = 1450 - 2P and market supply is given by Qs = 15P - 100. The government imposes a tax of $10 per unit on suppliers. The new, after-tax supply curve is given by Qs* = 15P - 250. Suppliers receive a price of
a. $100.00
b. $90.00
c. $91.18
d. none of the above.

____ 18. Market demand is given by Qd = 1450 - 2P and market supply is given by Qs = 15P - 100. The government imposes a tax of $10 per unit on suppliers. The new, after-tax supply curve is given by Qs* = 15P - 250. The deadweight loss due to taxation is approximately
a. $12,500.00
b. $176.40
c. $88.20
d. none of the above.

____ 19. Market demand is given by Qd = 1450 - 2P and market supply is given by Qs = 15P - 100. The government imposes a tax of $10 per unit on suppliers. The new, after-tax supply curve is given by Qs* = 15P - 250. Complete the following sentence:
"Since the _____ burden of the tax falls on _____, the _____ curve is _____ _____ than the _____ curve."
a. larger; firm; demand; less elastic; supply
b. smaller; firm; supply; more elastic; demand
c. smaller; consumer; demand; less elastic; supply
d. larger; firm; supply; less elastic; demand.

____ 20. The marginal product of labour is equal to the
a. incremental cost associated with a one unit increase in labour.
b. incremental profit associated with a one unit increase in labour.
c. increase in labour necessary to generate a one unit increase in output.
d. increase in output obtained from a one unit increase in labour.

____ 21. Which of these assumptions is often realistic for a firm in the short run?
a. The firm can vary both the size of its factory and the number of workers it employs.
b. The firm can vary the size of its factory, but not the number of workers it employs.
c. The firm can vary the number of workers it employs, but not the size of its factory.
d. The firm can vary neither the size of its factory nor the number of workers it employs.

____ 22. Let L represent the number of workers hired by a firm and let Q represent that firm's quantity of output. Assume two points on the firm's production function are (L = 12, Q = 122) and (L = 13, Q = 130). Then the marginal product of the 13th worker is
a. 8 units of output.
b. 10 units of output.
c. 122 units of output.
d. 130 units of output.

____ 23. If marginal cost is rising,
a. average variable cost must be falling.
b. average fixed cost must be rising.
c. marginal product must be falling.
d. marginal product must be rising.

____ 24. When marginal cost is less than average total cost,
a. marginal cost must be falling.
b. average variable cost must be falling.
c. average total cost is falling.
d. average total cost is rising.

____ 25. The marginal cost curve crosses the average total cost curve at
a. the efficient scale.
b. the minimum point on the average total cost curve.
c. a point where the marginal cost curve is rising.
d. All of the above are correct.

Scenario 1
A certain firm produces and sells staplers. Last year, it produced 5,000 staplers and sold each stapler for $8. In producing the 5,000 staplers, it incurred variable costs of $30,000 and a total cost of $45,000.

____ 26. **Refer to Scenario 1**. In producing the 5,000 staplers, the firm's average fixed cost was
a. $3.
b. $4.
c. $5.
d. $7.

____ 27. **Refer to Scenario 1**. In producing the 5,000 staplers, the firm's average total cost was
a. $6.
b. $7.
c. $8.
d. $9.

Table 1

Measures of Cost for ABC Inc. Widget Factory			
Quantity of Widgets	Variable Costs	Total Costs	Fixed Costs
0			$10
1	$ 1		
2	$ 3	$13	
3	$ 6	$16	
4	$10		
5		$25	
6	$21		$10

____ 28. **Refer to Table 1**. The average total cost of producing one widget is
a. $1.00.
b. $10.00.
c. $11.00.
d. $22.00.

____ 29. **Refer to Table 1 on the previous page**. The marginal cost of producing the sixth widget is
a. $1.00.
b. $3.50.
c. $5.00.
d. $6.00.

____ 30. Consider the following information about bread production at Beth's Bakery:

Worker	Marginal Product
1	5
2	7
3	10
4	11
5	8
6	6
7	4

Beth pays all her workers the same wage and labour is her only variable cost. From this information we can conclude that Beth's marginal cost
a. declines as output increases from 0 to 33, but increases after that.
b. declines as output increases from 0 to 11, but increases after that.
c. increases as output increases from 0 to 11, but declines after that.
d. continually increases as output rises.

____ 31. In a competitive market,
a. no single buyer or seller can influence the price of the product.
b. there is a small number of sellers.
c. the goods offered by the different sellers are markedly different.
d. All of the above are correct.

____ 32. For a competitive firm,
a. Total revenue = Average revenue.
b. Total revenue = Marginal revenue.
c. Total cost = Marginal revenue.
d. Average revenue = Marginal revenue.

Table 2

Quantity	Total Revenue	Total Cost
0	$0	$10
1	9	14
2	18	19
3	27	25
4	36	32
5	45	40
6	54	49
7	63	59
8	72	70
9	81	82

____ 33. **Refer to Table 2 on the previous page**. At which quantity of output is marginal revenue equal to marginal cost?
a. 3
b. 6
c. 8
d. All of the above are correct.

____ 34. **Refer to Table 2 on the previous page**. If the firm finds that its marginal cost is $11, it should
a. increase production to maximize profit.
b. increase the price of the product to maximize profit.
c. advertise to attract additional buyers to maximize profit.
d. None of the above are correct.

____ 35. If marginal cost exceeds marginal revenue, the firm
a. is most likely to be at a profit-maximizing level of output.
b. should increase the level of production to maximize its profit.
c. must be experiencing losses.
d. may still be earning a profit.

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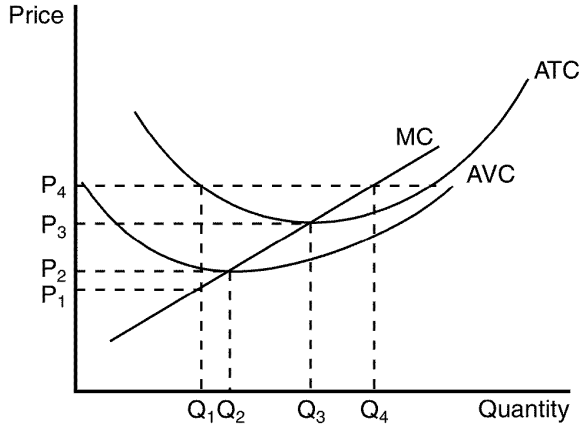
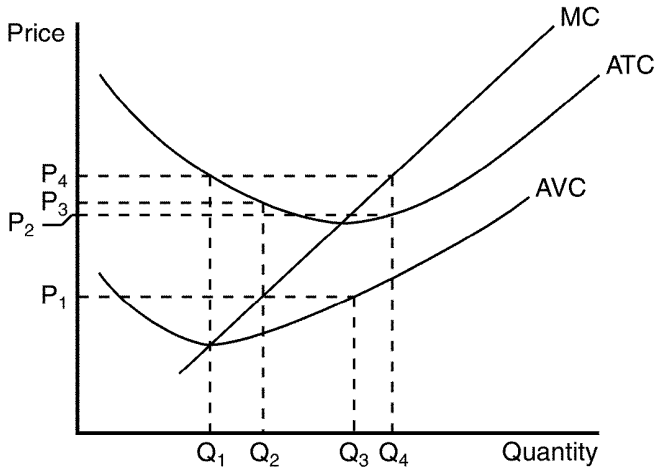
Figure 9



____ 36. **Refer to Figure 9**. When price rises from P_2 to P_3, the firm finds that
a. marginal cost exceeds marginal revenue at a production level of Q_2.
b. if it produces at output level Q_3 it will earn a positive profit.
c. expanding output to Q_4 would leave the firm with losses.
d. All of the above are correct.

____ 37. A profit-maximizing firm in a competitive market produces small rubber balls. When the market price for small rubber balls falls below the minimum of its average total cost, but still lies above the minimum of average variable cost, the firm
a. will experience losses but it will continue to produce rubber balls.
b. will shut down.
c. will be earning both economic and accounting profits.
d. should raise the price of its product.

Figure 10



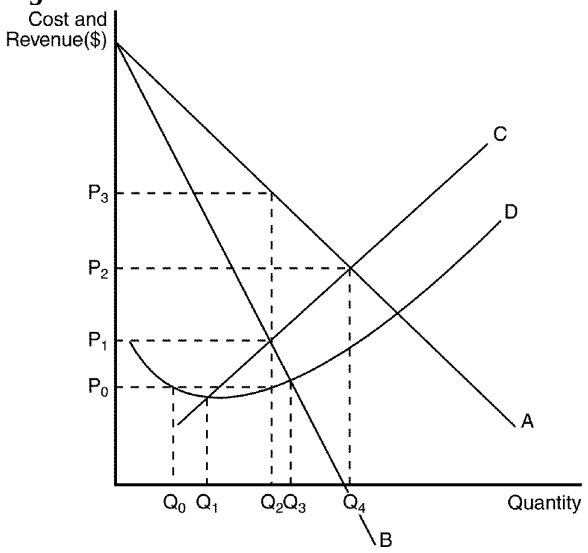
____ 38. **Refer to Figure 10**. When market price is P_1, a profit-maximizing firm's total profit or loss can be represented by which area?
a. $P_1 \times Q_3$; profit
b. $(P_3 - P_1) \times Q_2$; loss
c. $(P_2 - P_1) \times Q_1$; loss
d. We can't tell because we don't know fixed costs.

____ 39. When an industry is a natural monopoly,
a. it is characterized by constant returns to scale.
b. it is characterized by diseconomies of scale.
c. a larger number of firms may lead to a lower average cost.
d. a larger number of firms will lead to a higher average cost.

____ 40. A monopolist's marginal revenue is less than price because
(i) to sell additional units of the good, the price charged on all units must decrease.
(ii) with the sale of an additional unit, the monopolist receives less revenue for each of the previous units it planned to sell.
(iii) of the upward-sloping average revenue curve.

a. (i) and (ii)
b. (ii) and (iii)
c. (i) and (iii)
d. All of the above are correct.

Figure 11



____ 41. **Refer to Figure 11**. A profit-maximizing monopoly's profit is equal to
a. $P_3 \times Q_2$.
b. $P_2 \times Q_4$.
c. $(P_3 - P_0) \times Q_2$.
d. $(P_3 - P_0) \times Q_4$.

____ 42. The price of a good sold in a perfectly competitive market is $8. Each identical firm has a marginal cost function MC = 4Q. A profit-maximizing firm will produce
a. Q = 2
b. Q = 5
c. Q = 8
d. Q = 10.

____ 43. The price of a good sold in a perfectly competitive market is $8. Each identical firm has a marginal cost function MC = 4Q. The firm's marginal revenue is
a. $2
b. $10
c. $5
d. $8.

____ 44. In a perfectly competitive market, market demand is given by Qd = 50 - .5P and market supply is given by Qs = P - 10. Each identical firm has a MC = 4Q. Each firm is currently producing 5 units of output. Each firm is:
a. producing too little.
b. producing too much.
c. maximizing profit.
d. none of the above.

____ 45. In a perfectly competitive market, market demand is given by Qd = 50 - .5P and market supply is given by Qs = P - 10. Each identical firm has a MC = 4Q. The individual firm's supply curve (above minimum AVC) is given by the equation
a. Q = .25P
b. Q = .P - 10
c. Q = 5
d. none of the above.

____ 46. In a perfectly competitive market, market demand is given by Qd = 50 - .5P and market supply is given by Qs = P - 10. Each identical firm has a MC = 4Q. In the long run, if minimum LRAC = 40,
a. firms will enter the market.
b. firms will exit the market.
c. firms will earn zero economic profit.
d. firms will incur economic losses.

____ 47. Suppose the market described in Question #46 above is served by a monopolist with MR = 100 - 4Q. The monopolist's demand curve would be
a. P = 100 - 4Q
b. P = 40
c. Q = 10 - P
d. Q = 50 - .5P

____ 48. Suppose the market described in Question #46 above is served by a monopolist with MR = 100 - 4Q. The monopolist's marginal cost curve would be
a. the market supply curve
b. MC = 10 + Q
c. MC = 4Q
d. both A and B
e. both A and C.

____ 49. Suppose the market described in Question #46 above is served by a monopolist with MR = 100 - 4Q. The deadweight loss due to monopoly is
a. $432
b. $648
c. $324
d. $216.

____ 50. Suppose the market described in Question #46 above is served by a monopolist with MR = 100 - 4Q. If the monopolist's average total costs were constant at $28 (that is, ATC = 28), its profit would be
a. $432
b. $648
c. $324
d. $$216.

____ 51. Who bought 90 head of cattle from Professor Holmes' farmer friend?
a. Kevin Costner
b. Donald Trump
c. John Lennon
d. Brett Favre