

PRACTICE FINAL EXAM
University of Ottawa, ECO1104D (Fall 2008)

Answer Key

[1 point each]

1. C	17. D	33. B	49. D	66. D
2. B	18. C	34. D	50. A	67. C
3. B	19. A	35. B	51. D	68. A
4. C	20. D	36. A	52. A	69. B
5. D	21. C	37. B	53. D	70. C
6. A	22. A	38. A	54. C	71. D
7. C	23. A	39. A	55. B	72. D
8. D	24. B	40. B	56. D	73. B
9. B	25. D	41. D	57. C	74. A
10. C	26. A	42. C	58. B	75. C
11. C	27. A	43. D	59. C	76. C
12. B	28. B	44. B	60. C	77. D
13. D	29. B	45. A	61. A	78. C
14. C	30. C	46. D	62. D	79. A
15. D	31. A	47. D	63. B	80. A
16. C	32. C	48. A	64. D	81. D
			65. A	82. A

83. (3 points) Many anti-poverty groups use LICO as a measure of poverty. What are the limits of this measure?

We did not cover this, so I would not ask it. However, LICO is a relative (not an absolute) measure of poverty. As such, it is more a measure of income inequality than of poverty. It does not include in-kind transfers and therefore overestimates the level of income inequality. It is a poor indicator of economic progress because, as the economy grows, income grows on average and LICO moves up with it.

84. (5 points) Consider total cost and total revenue given in the table below:

Quantity	Total Cost (\$)	Total Revenue (\$)	Marginal Revenue	Marginal Cost
0	4	0		
1	6	5	5	2
2	9	10	5	3
3	15	15	5	6
4	22	20	5	7
5	30	25	5	8
6	39	30	5	9

- a. Calculate marginal revenue and marginal cost for each quantity. [2 points]

I've added these to the table above.

- b. How much should the firm produce to maximize profits? [1 point]

The firm should produce where $MR = MC$. $MR > MC$ at $Q = 2$, but $MR < MC$ at $Q = 3$. So the firm should produce 2 units of output.

PRACTICE FINAL EXAM
University of Ottawa, ECO1104D (Fall 2008)

Answer Key

- c. Can you tell whether this firm is in a competitive industry? [1 point]

Yes, the firm is in a competitive industry because MR is constant.

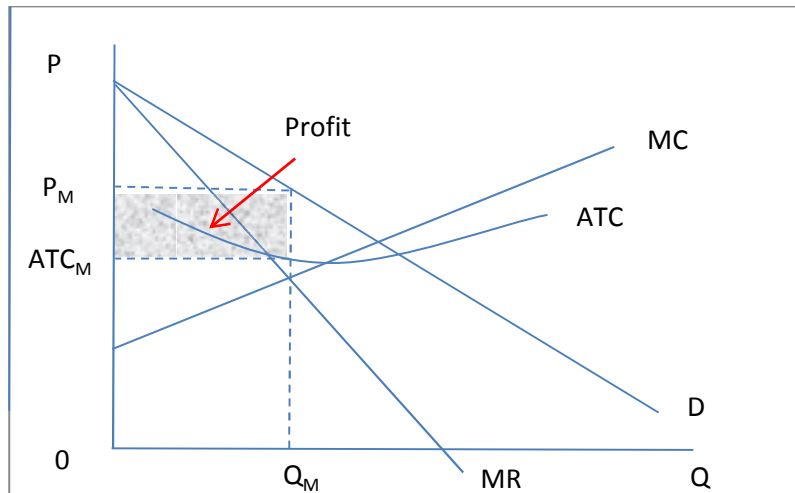
- d. Can you tell whether this firm is in a long-run equilibrium? [1 point]

At $Q = 2$ units of output, the firm is making a positive economic profit ($TR - TC = 1$). So this is not a long-run equilibrium.

85. (15 points) The Feelgood Drug Company holds a patent on one of its discoveries.

- a. Assuming that the production of the drug involves rising marginal cost, draw a diagram to illustrate Feelgood's profit maximizing price and quantity. Also show Feelgood's profits. [5 points]

The Feelgood Drug Company is a monopolist for as long as the patent lasts. In the diagram below, MC intersects ATC where ATC is at a minimum. The monopolist maximizes profit where $MR = MC$, and so will produce Q_M units of output at the price P_M . Profit per unit is $P_M - ATC_M$, and profit is area of the shaded rectangle.

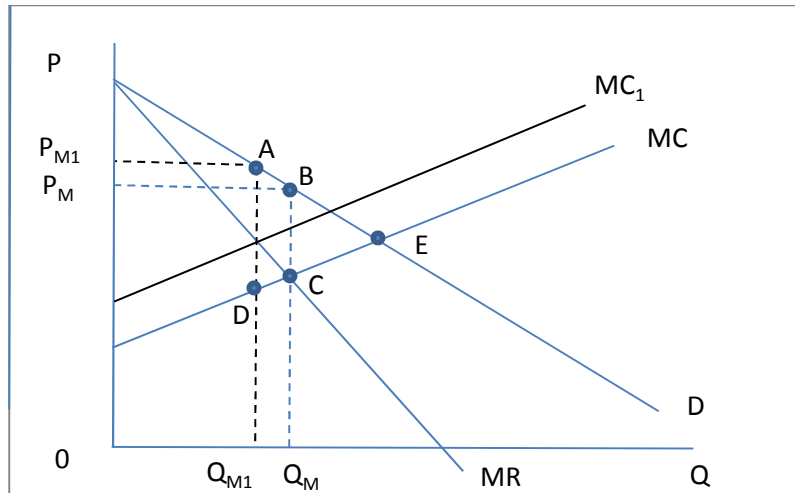


- b. Now, suppose the government imposes a tax on each bottle of the drug produced. On a new diagram, illustrate Feelgood's new price and quantity. How does each compare to your answer in part a? [5 points]

As shown in the diagram below, a per unit tax will shift the MC curve upwards by the amount of the tax. The monopolist will maximize profits where $MR = MC_1$. So, the consumer price will rise to P_{M1} and the monopolist's output will fall to Q_{M1} . Price is higher than in part a; quantity produced is lower.

PRACTICE FINAL EXAM
University of Ottawa, ECO1104D (Fall 2008)

Answer Key



- c. What is the impact of this tax on welfare? Explain. [5 points]

This is too complicated a question – I would not ask it. However, you can easily tell that consumers surplus falls. Producers surplus would increase due to the increase in price, but would fall because output falls and because the tax would give some of the producers surplus to government. Tax revenue would, of course, rise. The effect on total surplus would be a combination of these three components. The resulting deadweight loss (equal to area ABCD in the diagram above) would add to the deadweight loss caused by only the monopoly (equal to area BCE in the diagram above). This type of taxation is not an effective solution to dealing with the problem that monopolies do not allocate a society's resources efficiently.

- d. Instead of the tax per bottle, suppose the government imposes a tax on Feelgood of \$10 million regardless of how many bottles are produced. How does this tax affect Feelgood's price, quantity and profits? Explain.

This type of tax is called a "lump sum tax". It does not affect the MC curve. As a result, the monopolist's production and price would not change due to the tax. The tax would, however, transfer the monopolist's profits to the government in the form of tax revenue. The monopolist's profits would fall by \$10 million.