Economics 387
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Answers to Final Exam
Summer 2012

1.

a. Equilibrium price = 20; equilibrium quantity = 8; equilibrium expenditures = 160.
b. Equilibrium price = 32; equilibrium quantity = 12.8; equilibrium expenditures = 409.6.
c. Increase in quantity = 4.8. Increased cost to society = .5 * 4.8 * (20 + 32) = 124.8.

2.

a. For the monopolist, MR = MC.

   $TR = 480Q – 5Q^2$; MR = 480 – 10Q
   TC = 100 + 20Q; MC = 20

   Q* = 46; P* = 250; profits = 10480.

b. Optimal production where P = MC

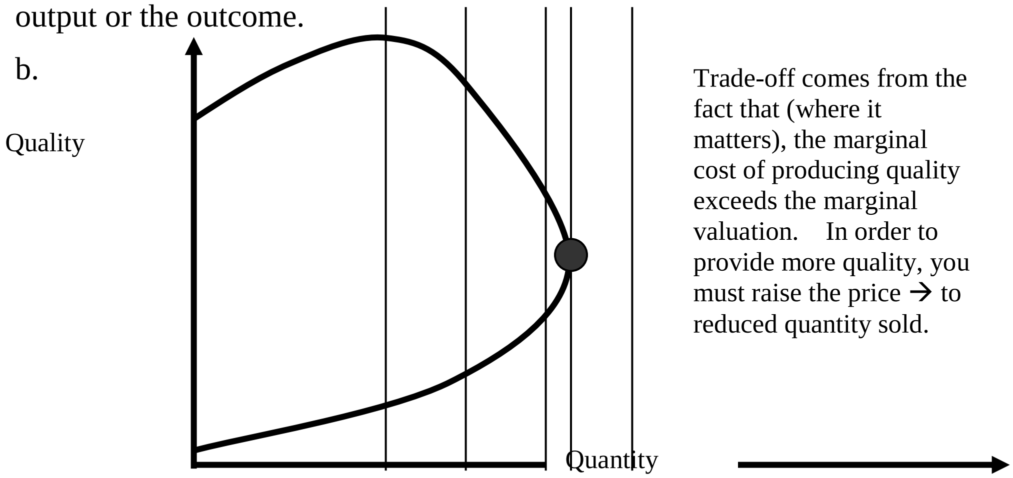
   480 – 5Q = 20; Q** = 92.

c. Fixed costs rise from 100 to 300. Total cost curve would now be 300 + 19Q. Marginal cost would equal 19.

3.

a. Quantity might be discussed in terms of number of beds, or number of patients, or number of operations. We're looking particularly at the output. Quality would involve, possibly, services/day, experience of the staff, level of comfort services, etc. Not directly related to the output or the outcome.

b.



Trade-off comes from the fact that (where it matters), the marginal cost of producing quality exceeds the marginal valuation. In order to provide more quality, you must raise the price → to reduced quantity sold.

c. If they must compete, they must provide similar products.

d. We have vertical indifference curves, because no amount of quality will compensate for a decrease in quantity at any level of utility. Leads to point X.

4.

a. Initial share is 5.6 + 0.0647*20 + 10*0.1 = 5.6 + 1.3 + 1 = 7.9% Increasing income by 10 leads to an increase to 8.55%.

b. Yes health is a luxury good. As income rises the share rises. If it were not a luxury good, the share would be unrelated to income.

c. No, age does not have a significant impact. Although the coefficient is 0.1, the t statistic doesn't even equal 1.00, so it is not a significant determinant.

d. Estimated value for the U.S. is 5.6 + 40*0.065 + 12.8* 0.1 = 9.5. The U.S. share is well over 15. Probably underestimates because of the particular importance in technology for the U.S.