

Microeconomics (Econ 101) – 1st Midterm (2013)

Time: 75 minutes

- Read all questions carefully and encircle the right answer or write where ever needed.
- Each question is worth two points unless otherwise indicated.
- At the end of the exam you need to return this question booklet.
- When you finish the exam hand in your exam and leave the exam hall. Please do not talk to anyone while you exit the room.
- If only 10 minutes are left please keep sitting until all the exams are collected
- In case cell phones are found to be switched on, or you are found talking in the exam hall your exam will be taken from you/cancelled.
- Please keep your ids out.
- Good Luck!

Please read the above instructions and sign here _____

Name _____; Student ID _____

Have Fun!

Multiple Choice Questions (7)
Graph and Written Exercises (2)

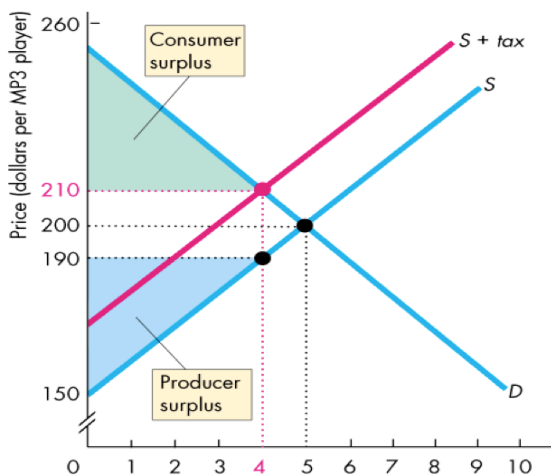
- Q1. If goods X and Y are complements in production, then a rise in price of good X
- Shifts the supply for both goods to the left
 - Shifts the supply of good X to the left and good Y to the right
 - Movement along the supply graph for good X and a right shift in the supply of good Y
 - Movement along both supply graphs
 - Shift the supply of good X to the right and good Y to the left

- Q2. Tick all those that would *shift* the production possibility frontier outside
- Decision to fully utilize unemployed resources
 - An increase in labor force
 - Increase in the stock of Capital

- Q3. As the price of good A rises, *the demand* for good B shifts right then which of these statements are true
- A is a factor used in the production of B
 - A and B are complements in production.
 - A and B are complements
 - A and B are substitutes
 - A and B are substitutes in production.

- Q4. As the price of good A rises, *the supply* of good B shifts left. Which of the following statements are true
- A is a factor used in the production of B
 - A and B are complements in production.
 - A and B are complements
 - A and B are substitutes
 - A and B are substitutes in production.

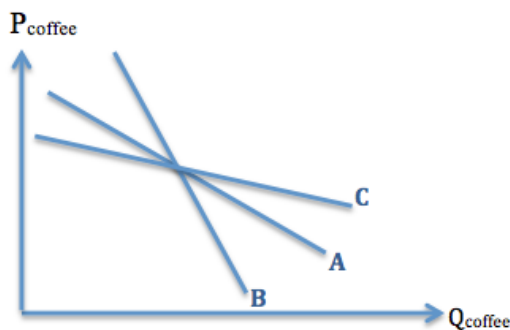
- Q5. (3 points) As depicted in the following graph - a tax of \$20 is imposed on the _____ of MP3 players and this generates _____ in revenue and _____ in dead weight loss.



- Consumers, \$80, \$20
- Producers, \$80, \$10
- Consumers, \$100, \$10
- Producers, \$100, \$10
- Producers, \$80, \$20

- Q6. If A & B are substitutes and the cost of an input used in the production of A increases, the price of
- A and B rise; ii) B rises but A falls; iii) B falls but A rises; iv) A rises but B stays the same.

- Q7. If "A" represents the demand graph for coffee, for students that can easily substitute between coffee and tea then the demand graph, for those students that don't have substitutes for coffee, must be _____ (B/C).

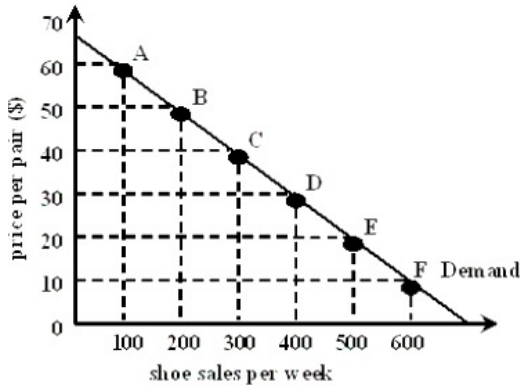


Extra Sheet for Rough Work / Material on this sheet will not be graded / so please keep your answers concise and in spaces provided for the answer.

Question 1 (30 points)

Nike(inc), decides to bring back an old line of men’s shoe ware in the year 2014. They hire you, as the financial stagiest to finalize the price that would maximize their profits.

They hand you the data from previous year (1994) on price and ‘quantity demanded’ for this line of shoe. After plotting these numbers you come up with a demand function for these shoes:



a) (2 points) (Fill in the blank) The Demand equation is: $Q_D = 700 - (\text{ }) p$
 (hint: confirm your answer by checking Q_D for $p=10$ from your equation and matching it with the graph)

b) Calculate the total revenue at different points on the graph (Just fill in the blanks) (3 points)

Total Revenue at Price \$10 is _____;

Total Revenue at price \$30 is _____;

Total Revenue at price \$50 is _____;

Then, you analyze the change in total revenue. (just circle one) (1 point)

Total Revenue (increases/decreases) as price is increased from \$10 to \$30

Total Revenue (increases/decreases) as price is increased from \$30 to \$50

You were about to do this exercise for all the 1000s of points on the demand curve, but then you suddenly remembered your econ 101 lectures, and realized that there was an easy way to answer this-price elasticity of demand!

c) Let “P” be the price where the demand function has unit elasticity.

(For following parts just circle the right answer)

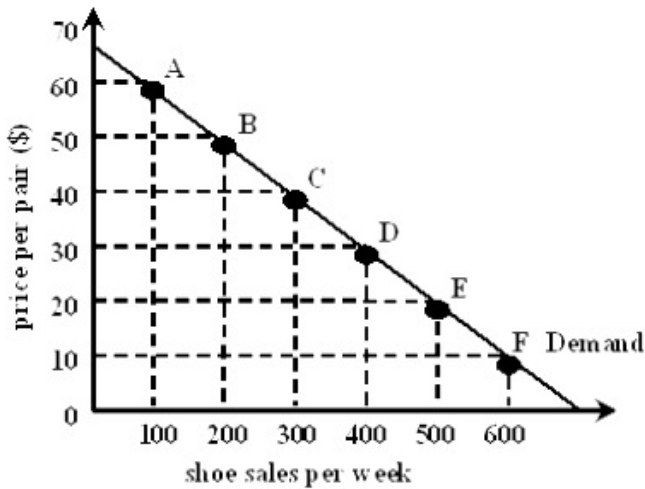
- i. For prices above this price ”P” demand is (elastic/inelastic) (1 point)
- ii. For prices below this price “P” demand is (elastic/inelastic) (1 point)
- iii. Above this price ”P”, total revenue (increases/decreases) as the price is **increased**. (2 points)
- iv. Below this price ”P”, total revenue (increases / decreases) as the price is **decreased** (2 points)
- v. Find (and prove) the price “P” at which the demand is unit elastic (please show your work here). (4 points)
 “P”= _____

vi. Total Revenue is maximized at price \$ (1 point) (no need to prove just fill in the blank)

d) You realize that the data for the demand function is from the year 1994, and in the last 20 years the Canadian economy has grown, and the GDP per capita has increased by 20%. Given that the income elasticity of demand for Nike shoes is 5, how does this change the demand equation, and the demand graph?

The new demand equation is _____ (2 points); and at price 30\$ the Q is _____ (1 point)

(Please show changes on the following graph and explain your answer in 1 to 2 sentences). (3 points)

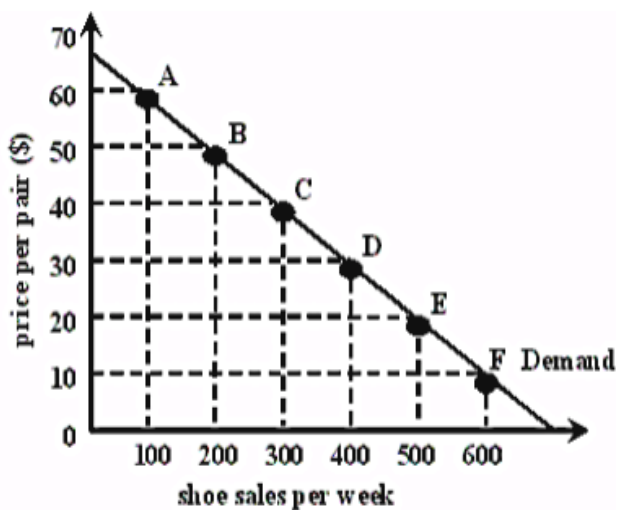


e) Show what happens to the demand function on the graph and the demand equation if the govt. imposes a consumer tax of 20 dollars on each pair of shoe.

The new demand equation is _____ (2 points), and at price 30\$ the Q is _____ (1 point)

(Please show changes on the following graph and explain your answer in 1 to 2 sentences). (3 points)

Answer



For the second question you have a choice between question 2, 3 or 4.

Question 2 (8 points)

On October 17, 1973, the Organization of Arab Petroleum Exporting Countries (OPEC) declared an embargo on the shipment of oil to those countries that had supported Israel in its conflict with Egypt. With one stroke, the total dependence of the industrialized world on oil, especially the US, became painfully clear. The effects of the embargo were immediate. The retail price of a gallon of gasoline rose from a national average of 40 cents in May 1973 to 60 cents in June 1974. President Nixon (a controlling man that he was) decided to set a price ceiling at 50 cents.

Illustrate using supply and demand graph the effect on *equilibrium quantity and quantity sold* of gasoline as the embargo came into effect. And then after the embargo, (on the same graph) show what happens to the quantity of gasoline sold as Nixon imposes the price ceiling. Is there any dead weight loss from the above two events? Show on your graph and explain in two to three lines. (*you are not required to show changes in consumer or producer surplus*)

Question 3 (8 points)

Illustrate the following with supply and demand curve. In 2000, the economy expanded, increasing the demand for labor and pushing up wages. What happened to the level of employment - show on the graph? Are the consumers (businesses employing labor) better or worse off after the economic expansion of 2000? (Hint: Shade the regions that represent the change in consumer surplus from before and after - for the old equilibrium quantity)

Question 4 (8 points)

Before the East European economic reforms the price of bread was regulated below the market equilibrium. With reforms came deregulations and free markets and the price of bread rose sharply. Illustrate using the supply and demand functions how did the total surplus change. (Make sure you show and discuss each component of the surplus including dead weight loss)

Answer to Question _____ (2 or 3 or 4)

Continue... Answer to Q _____