

Assignment 1
ECO 1104A – Introduction to Microeconomics
Instructor: Jakir Hussain
Summer 2017, University of Ottawa
Due Date: Tuesday, July 4th, in class

Note: This assignment carries 15% of the final grade. A total of 100 points are distributed evenly over all parts of the questions. The assignment is based on the materials covered in Chapter 4 of the textbook, Principles of Economics, 7th Canadian edition, by Mankiw, Kneebone, and McKenzie.

Question 1

For this question we will consider a hypothetical market for strawberries in Ottawa. Let us assume that the market for strawberries has the following demand and supply schedules:

Price (\$/lb)	Quantity Demanded (thousands of lbs)	Quantity Supplied (thousands of lbs)
1.99	150	0
2.99	120	50
3.99	110	70
4.99	90	90
5.99	75	110
6.99	50	130
7.99	25	150

- a) Plot the demand and supply curves in a graph. Make sure that you label the curves and write what you have put in each axis.
- b) What are the equilibrium price and quantity for strawberries? Identify the equilibrium point, equilibrium price and equilibrium quantity as E , P_e , Q_e , respectively.
- c) What happens to the market at prices \$3.99 and \$7.99 per pound? Is the market in equilibrium/excess demand/excess supply? Identify graphically and calculate the amounts of shortage/surplus in the market at these prices.
- d) It's rumored that a particular fertilizer that is believed to be positively associated with cancer has been used to grow strawberries. Use the supply and demand dia-

gram for strawberries to illustrate the effect on demand, supply, equilibrium price and equilibrium quantity for strawberries. Illustrate the adjustment process to the new equilibrium.

e) A long strike by the farm workers has been blamed for this year's bad harvest. Use the supply and demand diagram for strawberries to illustrate the effect on demand, supply, equilibrium price and equilibrium quantity for strawberries. Illustrate the adjustment process to the new equilibrium.

Question 2

Let us assume that the demand for housing in Ottawa is given by the following equation:

$$P = 500 - (1/20)Q.$$

However, the supply of housing units are fixed at 6000 for this year.

a) Plot the demand and supply curves in a graph. Make sure that you label the curves and write what you have put in each axis.

b) What are the equilibrium price and quantity for houses in Ottawa? Use both algebra and graph to illustrate your answer.

c) Let us assume that the recent IT sector boom has resulted in an inflow of skilled IT workers in Ottawa and as a result the demand changes to

$$P = 1000 - (1/20)Q.$$

What are the equilibrium price and quantity for houses in Ottawa? Use both algebra and graph to illustrate your answer.

d) Now let us assume that the supply is given by the following equation:

$$Q = 60 + 8P.$$

What is the new equilibrium price and quantity of housing in Ottawa? Use algebra to answer this part.

e) An increase in consumer income has shifted the demand curve to:

$$Q = 11760 - 5P.$$

The supply curve stays the same as in part d. Find the equilibrium price and quantity. Use algebra to answer this part.