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ECON 151-012 Fall 2007
Problem Set 2
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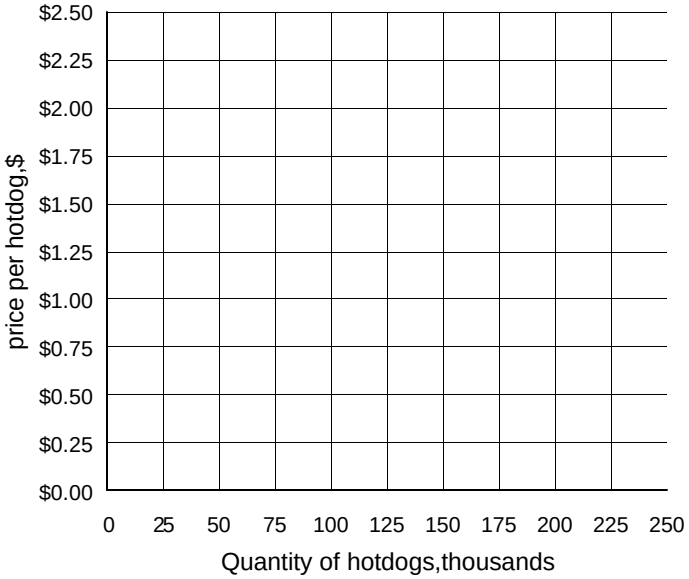
1. Below is a table showing the demand and supply schedule for hotdogs in Newark (the quantities of hotdogs are per year.). Using that information, plot the demand and the supply curve for hotdogs in Newark in Graph 1 and label the demand curve "**D_0**" and the supply curve "**S_0**". Then answer all questions on the following pages. Note: We will assume that all hotdogs sold are of similar sizes and quality.

Price ($ per hotdog)	Quantity demanded (thousand hotdogs)	Quantity Supplied (thousand hotdogs)
$1.00	250	50
$1.25	225	75
$1.50	200	100
$1.75	175	125
$2.00	150	150
$2.25	125	175
$2.50	100	200

Table 1

Supply and Demand for hotdogs in Newark



Graph 1

Plot the demand and supply curves in the graph above and label them "**D_0**" and "**S_0**" respectively.

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Fill in the blanks. Text in *Italics* denotes the only possible choices for the immediately preceding blank.

a. Based on information from the previous page, the competitive market forces would tend to establish an equilibrium price of $ _____ per hotdog and an equilibrium quantity of _____ thousand hotdogs.

b. If the price currently prevailing on the market is $2.25 per hotdog, buyers would want to buy _____ thousand hotdogs but sellers would want to sell _____ thousand hotdogs. Under these conditions there will be a _____ (*surplus, shortage*) of _____ thousand hotdogs and the competitive market forces would tend to cause the price to _____ (*rise, fall*) to a price of _____ per hotdog. At that new price, buyers would now want to buy _____ thousand hotdogs, and sellers would now want to sell _____ thousand hotdogs. Due to this change in _____ (*price, underlying conditions*), the _____ (*demand, quantity demanded*) changed by _____ thousand hotdogs, and the _____ (*supply, quantity supplied*) changed by _____ thousand hotdogs.

c. If the price currently prevailing on the market is $1.25 per hotdog, buyers would want to buy _____ thousand hotdogs but sellers would want to sell _____ thousand hotdogs. Under these conditions there will be a _____ (*surplus, shortage*) of _____ thousand hotdogs and the competitive market forces would tend to cause the price to _____ (*rise, fall*) to a price of _____ per hotdog.

Suppose that a new hotdog chain has opened a store in the city and as a result the supply schedule for hotdogs in Newark is as shown in the table below:

($ per hotdog)	(thousands of hotdogs)
$0.50	50
$0.75	75
$1.00	100
$1.25	125
$1.50	150
$1.75	175
$2.00	200

Table 2

Plot the new supply curve on the graph on the first page of the problem set and label it "**S_1**". Under the old demand **Do** and the new supply **S_1**, the competitive market forces would tend to establish an equilibrium price of $ _____ per hotdog and an equilibrium quantity of _____ thousand hotdogs. Compared to the market equilibrium with **Do** and **So**, we say that, due to this change in _____ (*price, underlying conditions*) the _____ (*supply, quantity supplied*) changed. The Equilibrium price _____ (*rose, fell*) and the equilibrium quantity _____ (*rose, fell*).

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Now suppose that with the new supply schedule at **S_1** there is an increase in people's incomes due to a nationwide expansion in the economy. This change results in a new demand schedule:

Price ($ per hotdog)	Quantity demanded (thousands of hotdogs)
$1.50	250
$1.75	225
$2.00	200
$2.25	175
$2.50	150

Table 3

Plot the new demand curve on the graph on the first page of the problem set and label it "**D_1**". Under the new supply **S_1** and the new demand **D_1**, the competitive market forces would tend to establish an equilibrium price of $ _____ per hotdog and an equilibrium quantity of _____ thousand hotdogs. Compared to the market equilibrium with **Do** and **S_1**, we say that, due to this change in _____ (*price, underlying conditions*) the _____ (*demand, quantity demanded*) changed. The equilibrium price _____ (*rose, fell*) and the equilibrium quantity _____ (*rose, fell*).

2. The demand for Coca-Cola cans in Newark is given by **Qd**=120,000-10,000*__P__ and the supply by **Qs**=60,000+20,000*__P__, where **P** is the price per can of Coca-Cola.

   a. What is the equilibrium **quantity** and **price** in this market? (Show your work.)

   b. If the government decides to fix the price in Newark at $1.50 per can, there will be a _____ (*shortage, surplus*) in the market for Coca Cola cans.
   Calculate the size of that *shortage/surplus!*

   c. Suppose the observed market price is $4.00 per can. There will be a _____ (*shortage, surplus*) of _____ cans.

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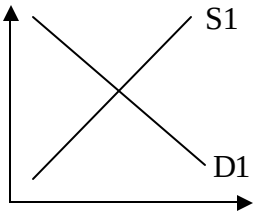
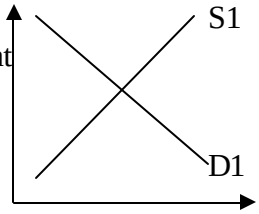
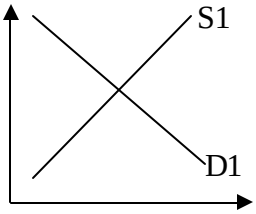
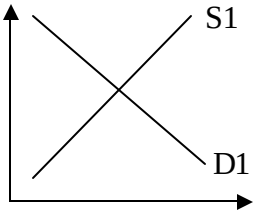
3. Analyze the events described to the left of the diagrams below and indicate the changes in demand (D), supply (S), equilibrium price (P) and equilibrium quantity (Q) due to those events. First show in the diagrams how supply and/or demand shift in response to the event labeling the new curves S2 and D2 (sketch the new curves). Then fill in the table to the right of the diagrams using '+' to indicate increase, '-' to indicate decrease, '0' to indicate no change and '?' if the effect cannot be determined. Remember that you are trying to find the first effect of the event or events noted on the market indicated in the left column.

MARKET	EVENTS	DIAGRAM	D	S	P	Q
a. Peanut Butter	The price of peanuts, essential to making peanut butter, rises		__	__	__	__
b. iPods	Price of CD players increases (assume that these goods are substitutes)		__	__	__	__
c. Apples	A drought destroys half the apple crop; The number of consumers increases.		__	__	__	__
d. Computers	Consumers' incomes decrease; (computers are normal goods) The prices of micro-chips, essential components of all computers, rise		__	__	__	__