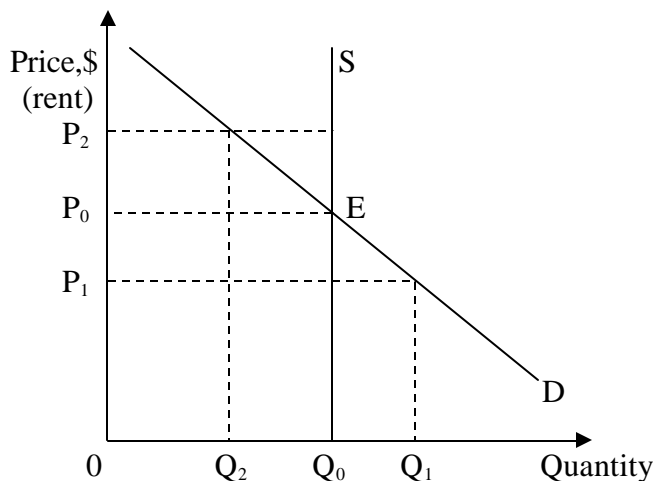


ECON 151-012: Fall 2007

Problem Set 4

Dr. Charlie Link

1) The Supply and Demand curves for rental housing in Orlando are shown in the graph below.



- The pre control equilibrium price (rent) is _____.
- The pre control equilibrium quantity is _____.
- What price will be observed in the market if a price ceiling of P_1 is imposed on the market? _____. What type of situation will be present? _____ (shortage, surplus, equilibrium)? How big will be the shortage/surplus, if any? _____.
- What price will be observed in the market if a price floor of P_2 is imposed on the market? _____. What type of situation will be present? _____ (shortage, surplus, equilibrium)? How big will be the shortage/surplus, if any? _____.

Now summarize:

- A price ceiling is the (minimum, maximum) _____ price a seller may charge for a product or service. If the price ceiling is below the market equilibrium price a (surplus, shortage) _____ will arise in the market. A price floor is the (minimum, maximum) _____ price a seller may charge for a product or service. If the price floor is above the market equilibrium price a (surplus, shortage) _____ will arise in the market.
- What does the long-run supply curve in that market look like? Draw it in the graph and label it S_{LR} . Label the new quantity supplied under the new supply and a price ceiling of $P_1 - Q_{LR}$. Then answer the questions in “g”
(Note: your long-run supply curve MUST go through point E)
- The shortage in the long run is (larger, smaller) _____ compared to the one that existed in the short-run (under the same price ceiling of P_1). Use the concept of price elasticity of supply to justify your answer (in one sentence).

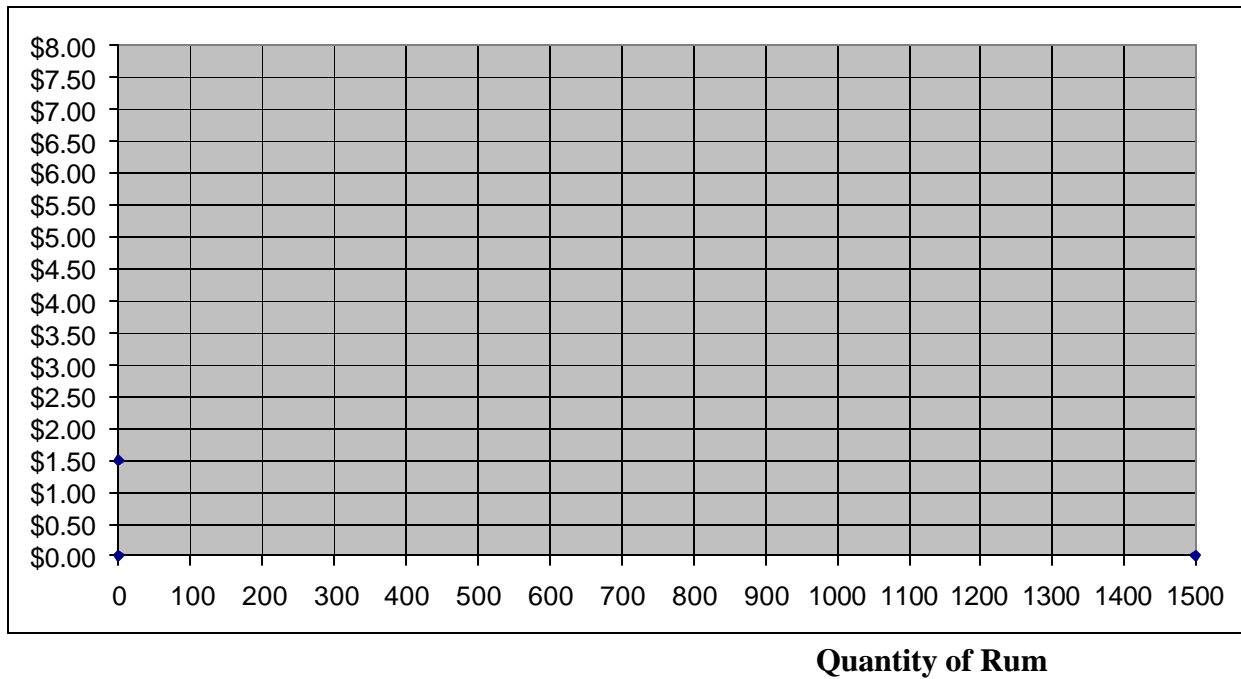
2) The following table shows the Supply and Demand for rum in the US.

Table 1: Market for rum in US

Price per pound \$	Quantity demanded (in thousand liters)	Quantity supplied (in thousand liters)	Quantity supplied after the tax (in thousand liters)
7.00	100	1100	
6.75	200	1000	
6.50	300	900	
6.25	400	800	
6.00	500	700	
5.75	600	600	
5.50	700	500	
5.25	800	400	
5.00	900	300	

\$P/liter

Figure 1



Draw the pretax demand and supply curves in Figure 1. Label them D1 and S1.

a) Before tax:

The equilibrium price is _____.

The equilibrium quantity is _____.

Buyers are spending a total of _____ x _____ = _____ on rum.

Sellers are receiving a total of _____ x _____ = _____ from selling rum.

Name: _____ Row: _____ Seat: _____ Section: _____

b) After tax:

Suppose the government introduces a tax of \$1.00 per liter of rum. Fill in the column above in table 1 showing the supply schedule after the adjustment is made for the \$1.00 per liter tax on rum that is paid by the seller. Draw the new supply curve in the graph in figure 1 and label it S2.

Then answer the following questions:

The new equilibrium quantity is _____.

The new equilibrium price paid by the buyers is _____.

The new equilibrium price received by sellers is _____.

Buyers would spend a total of _____ x _____ = _____ on rum.

Sellers would receive a total of _____ x _____ = _____ from selling rum.

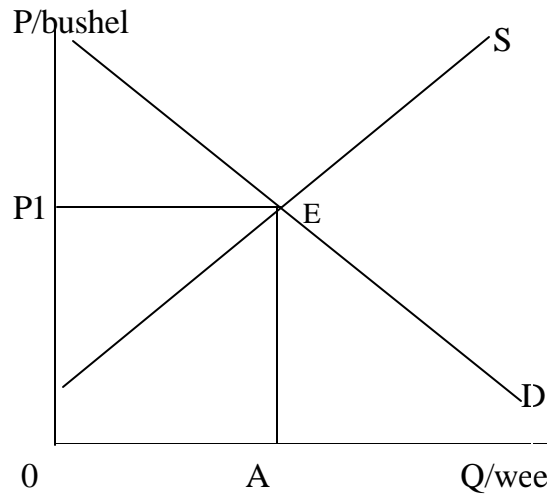
The government revenue from this tax would be _____ x _____ = _____.

The consumers' burden would be _____ x _____ = _____.

The producers' burden would be _____ x _____ = _____.

Note that on an exam you should be able to obtain the answers above if you are given a graph as in figure 1 or a schedule as in table 1.

3. Market for Corn



- a) Free market equilibrium price = _____
 Free market equilibrium quantity = _____

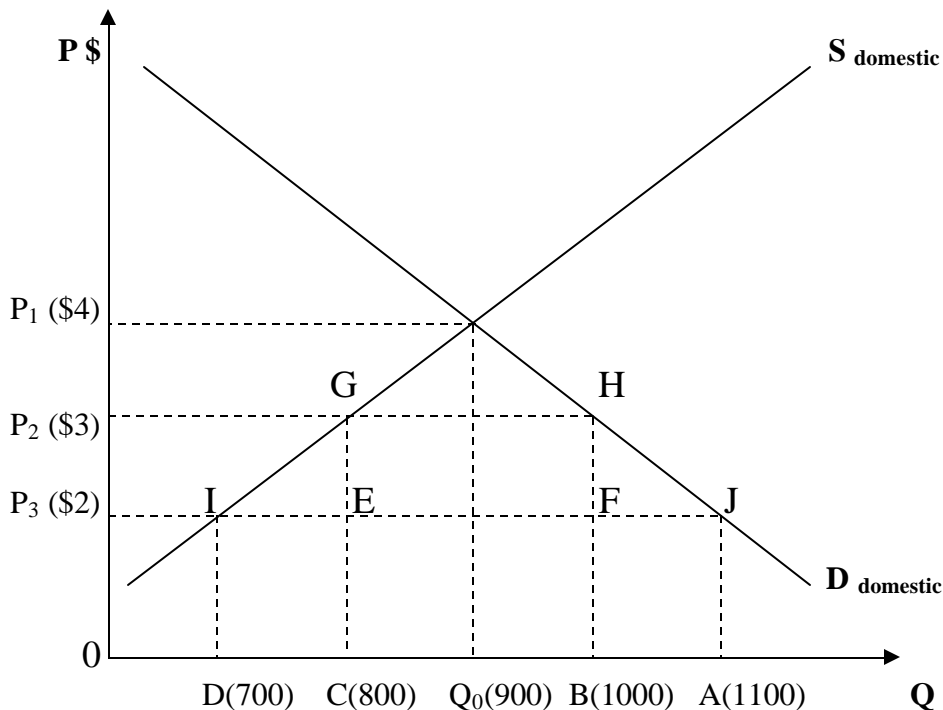
For a price floor to be binding, where must it be set?

- b) Draw a binding support price for corn and label it P_s . Let the new Q_d be B on the horizontal axis and F on the demand curve directly above the point B, and the new Q_s be C on the horizontal axis and G on the point on the supply curve directly above C.

Due to the support price, quantity demanded (falls/rises) from _____ to _____, the quantity of corn supplied (falls/rises) from _____ to _____, and the (surplus/shortage) equals _____.

- c) Given the support price for corn of P_s , the amount consumers will spend on corn is the area of the rectangle (give the letters) _____ .
 d) Given the support price for corn of P_s , the amount the government will spend on corn is the area of the rectangle (give the letters) _____ .

e) Suppose that instead of a support price of P_s , that P_s is the **target price**. Carefully label and denote in the graph the area of a rectangle that indicates how much consumers of corn will spend and give the letters here _____. Also indicate the area of a rectangle in the graph that shows how much the government will spend on corn and give the letters here _____ (You will need to indicate the correct rectangles in the graph above -- and of course will need some new letters.)



Can use letters or numbers for your answers.

- Pre trade price of steel = _____
Pre trade quantity of steel = _____
- Suppose the U.S. opens up its market for steel to the Japanese (and they are the rest of the world), and hence there is free trade. What must be true about the world price, P_w , for the U.S. to have any incentive to trade? _____

Suppose the free trade price is \$2 (P_3).

Post trade quantity demanded = _____
Post trade quantity supplied domestically = _____
Imports = _____

- Suppose a tariff P_3P_2 (we assume a \$1 per unit imported) is imposed on the steel imported into the U.S. As a result of the tariff, the new:**
U.S. quantity demanded = _____. When compared to the free trade situation, it (fell/ rose / did not change/ (circle your answer)).
U.S. quantity supplied domestically = _____. When compared to the free trade situation, it (fell, rose, did not change).
Imports = _____. When compared to the free trade situation, it (fell / rose/ did not change/ circle your answer)).
U.S. government tariff revenue = _____.

Gainers from the tariff are: Please list them.

Losers from the tariff are: Please list them.