

**HOMEWORK 5**  
**FLOORS, CEILINGS, WALLS AND WEDGES**  
**ECON 101**  
**PROF. GUSE, W & L UNIVERSITY**

- (1) Problem #4, Parkin, Chapter 6.  
(2) **Rent Control.** Suppose that demand for apartments is given by the following function.

$$Q_d(p) = 1000 - p$$

All rental housing units are identical with a supply given by the following.

$$Q_s(p) = \max\{0, -500 + 2p\}$$

Consider three cases. (i) No Rent Control. (ii). Rent Control where apartment (somehow) end up with the highest willingness to pay tenants. (iii). Rent Control where apartments (somehow) end up with the lowest willingness to pay tenants.

- (a) Fill in the following table. Be sure to show your work and attach any graphical analysis used to obtain your numbers.

	No Rent Control	RC: Highest WTP First	RC: Lowest WTP First
Quantity			
Price			
Consumer Surplus			
Producer Surplus			
Social Surplus			
Rental Income			

- (b) In the case of rent control where the apartments go to the highest willingness to pay tenants, describe any incentives you can think of which may either disrupt or reinforce this allocation.  
(c) Answer the same question for the case where the apartments go the lowest WTP tenants.  
(3) **Price Supports.** Consider a hypothetical market for rice in millions of pounds per year.

$$Q_d = 2 - 1p$$

$$Q_s = \max\{0, -.5 + 2p\}$$

where  $p$  is the price of rice (in \$ / pound). Suppose the government offers to buy an unlimited quantity of rice at \$1.25. Consider three different policies for what the government does with the surplus it purchases.

- (a) Dumps it in the ocean. Draw a diagram identifying government expenditure, change in consumer surplus, change in producer surplus and dead-weight loss.
  - (b) Gives it (somehow) only to consumers willing to pay *less* than \$1.25 per pound. Compared to the case where the government dumps the surplus in the ocean, how do the surplus values you calculated in the previous part change?
  - (c) The government must depend on truthful reporting of willing to pay in order to implement the previous allocation rule. Discuss how your analysis changes if people lie and *understate* their willingness to pay.
  - (d) An alternative approach to guarantee a higher price to supplier than the market price is to offer them a *deficiency payment*. Under this type of program, the government does not actually buy any rice. Instead they offer to write a check to each supplier for the difference between what the market paid and the supported price. Compare the welfare effects of this policy with the government purchase program.
- (4) The City of Mayberry is determined to reduce the number of taxicabs through a licensing program. There are two options for distributing the licenses. Under Option A, taxicab licenses are handed out to the friends and relatives of city officials. Under Option B, they are auctioned off to the highest bidders.
- (a) Assume that once a taxicab operator is licensed, the license cannot be transferred, sold or leased. Discuss the difference in welfare effects of policy A and policy B.
  - (b) Ditch the assumption.