

Boston College
Problem Set 4, Fall 2012
EC 131 - Principles of Microeconomics (Continued)

2. The only four consumers in a market have the following willingness to pay for a good:

Buyer	WTP
Carlos	\$15
Quilana	\$25
Wilbur	\$40
Ming-la	\$45

- (a) Draw the market demand curve. **Clearly label all relevant values.**

- (b) Suppose that the market price is \$30. What is the total consumer surplus? How is it distributed among the consumers?

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3. Suppose that the market for green tea can be described by the following demand and supply curves (prices are per lb):

$$Q_d = 260 - 5P$$

$$Q_s = 8P$$

- (a) Find the market equilibrium (P^* and Q^*) in the absence of taxes. Draw the demand and supply curves, labeling all intercepts and the market equilibrium.

- (b) Draw the curves as in the last item, showing clearly the areas representing the consumer surplus (CS) and the producer surplus (PS). Calculate their values and the value of the total surplus (TS).

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- (c) Suppose now that the government decides to tax green tea by \$13 per lb. Calculate the tax equilibrium (that is, the values of P^c , P^s and Q^T).

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- (d) Draw the demand and supply curves again (with all their intercepts), indicating which areas correspond to consumer surplus (CS), producer surplus (PS), tax revenue (TAXR) and deadweight loss (DWL) for the tax equilibrium you derived in the last item

- (e) Calculate the values of CS, PS, TAXR and DWL from the last item.