**Solution (Assignment 4)**

**1/ Multiple choice questions**

1. Given your demand curve for bananas, as the price of bananas decreases, your consumer surplus will

(**a**) increase, because the gap between the price you would pay and the price you do pay is greater than before.

(b) decrease, because marginal utility diminishes as more of a good is bought.

(c) remain constant, because the demand curve has not changed position.

(d) remain constant, because the maximum price you would pay has not changed.

2. Joe would pay $2.00 for his first cup of soda during the Roland Garros championship game. He would pay $1.20 for his second, $1.00 for his third, and 80¢ for his fourth. If the price is

(a) $1.00 per cup, Joe will buy 3 cups and have a consumer surplus of $4.20.

(b) $1.00 per cup, Joe will buy 3 cups and have a consumer surplus of $3.20.

(**c**) $1.10 per cup, Joe will buy 2 cups and have a consumer surplus of $1.00.

(d) $1.10 per cup, Joe will buy 2 cups and have a consumer surplus of $2.10.

If p = 1 🡺 Joe will buy 3 cups and have a consumer surplus of $1.2 ($1 for the first cup, $0.2 for the second, and $0 for the third) 🡺 (a) and (b) are false.

If p = $1.1 🡺 Joe will buy 2 cups and earn a consumer surplus of $1. ($0.9 for the first cup and $0.1 for the second cup) 🡺 (c) is correct.

3. The market demand curve for pizza is given by *Qd* = 400 – 25*P* where *P* is the price of pizza in dollars. If the price of pizza is $10, the consumer surplus is

(a) $150.

(b) $225.

(**c**) $450.

(d) $800.

The area representing the consumer surplus is equal to: (½) [(Maximum price – current price) (quantity demanded at the current price)]

Given *Qd* = 400 –25*P*, the maximum value for *P* (the value of P where Qd = 0) is $16 (i.e., 400/25). When *P* = $10, *Qd* = 150. Consumer surplus is 1/2(*P*max – *P*current)*Qd*. So 1/2($16 – $10)150 = $450.

**2/ Question:**

Several students were standing in a rather long line at the campus cafeteria. One was heard to remark that she wished the cafeteria would increase prices. Can you explain why?

Given the current price of a meal at the cafeteria and the students’ demand curve for having meals at the cafeteria; higher prices would reduce the quantity demanded of meals: many students will not value having a meal at the cafeteria as high as the new (and higher) price. This will cut down on waiting time. The student who was heard saying she wished the cafeteria would increase prices is actually willing to pay higher prices to avoid waiting in line.