Chapter 7 Practice Problems

Elements of Microeconomics - Section 4

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Question 1

Consider Figure 1 from chapter 7 in the textbook.

What is the auction price if there is only one record at auction?

Assume that another buyer, Yoko, enters the market and has a willingness to pay of $100. What happens to the auction price if there is still only one record at auction?

Question 2

Consider the market for coffee in figure and construct a graph of demand and supply for the market.

Part A

Draw the total surplus at the market equilibrium, identifying consumer surplus and producer surplus.

Part B

Now suppose the government imposes a tax on consumption of coffee.

1. Illustrate the impact of the tax on the market equilibrium; what happens to P and Q?
2. Identify graphically the change to consumer surplus?
3. Identify graphically the change to producer surplus?
4. Do we still have the same amount of total surplus in the market as we did previously?

Part C

Now suppose the government provides a subsidy to producers for each cup of coffee they sell, and answer the same questions as in Part B.

Question 3

Frank values his time at \$70 per hour. He agrees to spend 4 hours helping Shane with his gardening. Shane has a total willingness to pay of \$400 for Frank to do his gardening. They settle on a price of \$350.

1. What is the value of the consumer surplus?
2. What is the value of the producer surplus?
3. Can any other price increase or decrease total surplus in the market?

Question 4

Consider a market where Victoria is selling bottles of water and Gerri is buying them. Their willingness to pay and costs to produce are given below

	Victoria's value for a bottle	Gerri's cost to produce
1st bottle	\$13	\$1
2nd bottle	\$10	\$3
3rd bottle	\$7	\$5
4th bottle	\$4	\$7
5th bottle	\$1	\$9

1. What is the quantity demanded and quantity supplied at the prices \$9, \$6, and \$3?
2. At which of these prices is there an equilibrium?
3. What are the consumer surplus, producer surplus, and total surplus in equilibrium?
4. What would happen to total surplus if Victora consumed one less bottle of water and Gerri produced one fewer?
5. What would be the change to consumer producer, and total surplus at the original equilibrium price if Victoria's preferences for bottles of water increases such that shes willing to spend an additional \$3 on every bottle of water?
6. What would the new equilibrium price and quantity be in the example above?