**Problem set 3b**

**Scenario**

The graph below describes the market for cigarettes in the United States. Price is measured in dollars per pack and quantity is measured in billions of packs per year.

**Question 1.1**

1.1. What is the equilibrium price of cigarettes, in dollars?

- A. $25.00
- B. $3.00
- C. $5.25
- D. $0.75

**Question 1.2**

1.2. What is the equilibrium quantity of cigarettes, in billions of packs?

- A. 3
- B. 25
- C. 30
- D. 40
Question 1.3
1.3. What is the dollar value of consumer surplus at the equilibrium, in billions?

- A. $31.25
- B. $50.00
- C. $62.50
- D. $137.5

Question 1.4
1.4. What is the dollar value of producer surplus at the equilibrium, in billions?

- A. $31.25
- B. $50.00
- C. $62.50
- D. $137.5

Question 1.5
1.5. Suppose the government imposes a tax of $1 per pack on sellers. What is the new equilibrium price of cigarettes paid by buyers?

- A. $2.00
- B. $3.00
- C. $3.50
- D. $4.00

Question 1.6
1.6. Given the $1 tax, what is the new equilibrium quantity of cigarettes, in billions of packs?

- A. 15
- B. 20
- C. 25
- D. 35

Question 1.7
1.7. Given the $1 tax, what is the net price received by sellers, in dollars? That is, after paying the tax, how much
money do they have left from the sale of a pack of cigarettes?

- A. $2.50
- B. $3.00
- C. $3.50
- D. $4.00

**Question 1.8**

1.8. How much tax revenue is generated by the tax?

- A. $0
- B. $15 billion
- C. $20 billion
- D. $25 billion

**Question 1.9**

1.9. What is the deadweight loss created by this tax?

- A. $2.5 billion
- B. $5 billion
- C. $10 billion
- D. $15 billion

**Scenario:**

Suppose the supply and demand for American Flags is given by the following equations:

\[ QD = 200 - 5P \]
\[ QS = 25 + 2P \]

(Don't worry about the units. Just report whatever values you get from the above equations.)

**Question 2.1**

2.1. What is the price elasticity of demand between the prices of $9 and $11?

Please enter 2 digits after the decimal point.

**Question 2.2**

2.2. At what price is total revenue from flag sales highest?
**Question 2.3**

2.3. Suppose the government, in an effort to support flagmakers, sets a minimum price per flag of $25.50. The quantity traded will be... (Don't worry if it's not an even number, just enter the decimals. I.e. assume it is possible to sell a fraction of a flag.)

Please enter 1 digit after the decimal point.

**Question 2.4**

2.4. Suppose that instead of a price floor, the government imposes a tax on flag sellers equal to $1.75 per flag. In other words, each time a producer sells a flag, she must pay $1.75 to the government. As a result of this tax, the price paid by consumers (PC) is...

Please enter 2 digits after the decimal point.

**Question 2.5**

2.5. Suppose that instead of charging sellers of flags, the government imposes a $1.75 tax on purchases of flags. (When buying a $20 flag, the cash register rings up $21.75) Are consumers better-off, worse-off, or indifferent to the case in (4) above where sellers are charged?

- A. Better-off
- B. Worse-off
- C. Indifferent

**Question 2.6**

2.6. What is the deadweight loss of the tax on consumers? (Round to two decimal points.)

Please enter 2 digits after the decimal point.

**Question 2.7**

2.7. How much revenue is raised from the tax on producers?

Please enter 2 digits after the decimal point.
2.8. What is the deadweight loss of the price floor of $25.50 imposed in part 3? (Round to 2 decimal places.)

Please enter 2 digits after the decimal point.