Prob. Set 2
Demand and Supply, Market Equilibrium, Market Efficiency

Question 1

1. Suppose you are caller number 10 on the Hot 99.5 concert promotion, and win two back-stage passes with front row tickets to a Black Eyed Peas concert at Madison Square Garden. You and a friend purchase train tickets to New York ($150 each, round trip, for a total of $300). You find a hotel for $175 for the night, which you pre-pay to guarantee the reservation.

You travel to New York, check into your hotel, and head over to the concert. On your way into the Garden, a ticket scalper (er, "broker") offers you $500 each for your tickets ($1000 total in cash). You decide to ignore the scalper and see the concert. At that moment, what is the opportunity cost of seeing the concert for the two of you?

$ __________
Please enter a whole number, with no decimal point.

Scenario

Please indicate whether each of the following statements is positive or normative. (Note, some of these are close calls.)

Question 2.1

2.1. It is not right for Georgetown University to restrict alcohol consumption in student residences.

☐ A. Normative  
☐ B. Positive

Question 2.2

2.2. Tony Snow announced last week that he is resigning as White House Press Secretary because he cannot afford to live on his salary of $168,000 per year.

☐ A. Normative  
☐ B. Positive

Question 2.3

2.3. Federal Reserve Chairman Ben Bernanke is a good economist.

☐ A. Normative  
☐ B. Positive
Question 2.4

2.4. If the housing market continues to sink, at the next meeting of the Federal Reserve Board, Chairman Bernanke should have all the board members play a game of "duck, duck, goose."

☐ A. Normative

☐ B. Positive

Question 2.5

2.5. Professor Levinson's Econ 001 class will meet on the Tuesday before Thanksgiving Day.

☐ A. Normative

☐ B. Positive

Question 2.6

2.6. Georgetown University is ranked 2nd among all liberal arts colleges in the U.S., behind the first-ranked Appalachian State.

☐ A. Normative

☐ B. Positive

Scenario:

Suppose the supply and demand for Airline Shuttle tickets on the 10:30 AM flight from Washington DC to New York City is described by the following two equations:

\[
Q_D = 480 - 2P \\
Q_S = 20 + 2P
\]

Question 3.1

3.1. What is the equilibrium price of shuttle tickets?

$\underline{\hspace{2cm}}$

Please enter a whole number, with no decimal point.

Question 3.2

3.2. What is the equilibrium quantity of shuttle tickets?

\underline{\hspace{2cm}}
**Question 3.3**

3.3. Demand for Amtrak train tickets increases from 100 to 120 when the price of Airline Shuttle tickets increases from $20 to $25. Are the two goods substitutes or complements?

- A. substitutes
- B. complements

**Question 3.4**

3.4. Demand for Tumi suitcases decreases from 50 to 25 when the price of Airline Shuttle tickets increases from $20 to $25. Are the two goods substitutes or complements?

- A. substitutes
- B. complements

**Scenario:**

The demand and supply schedules for chewing gum are as follows:
Supply: \( Q = 3P - 30 \)
Demand: \( Q = -2P + 220 \)
Where \( P \) is the price of gum, and \( Q \) is the quantity, in millions of packs.

**Question 4.1**

4.1. What is the equilibrium price of gum?

Please enter a whole number, with no decimal point.

**Question 4.2**

4.2. How many packs of gum will be bought and sold in equilibrium? (Answer in millions, so if the answer is 9,000,000 packs, write "9").

Please enter a whole number, with no decimal point.

**Question 4.3**

4.3. Suppose that a huge fire destroys one-third of the gum factories. The supply of gum decreases to two-thirds of the amount shown in the above supply curve (i.e. at every price, 2/3 as much is supplied as was before the fire). What is the new equilibrium quantity of gum? (In millions).
Question 4.4

4.4. What is the new (post-fire) equilibrium price of gum?

Please enter a whole number, with no decimal point.

Question 4.5

4.5. Has there been a shift in or a movement along the supply curve?

☐ A. shift
☐ B. movement along

Question 4.6

4.6. Has there been a shift in or a movement along the demand curve?

☐ A. shift
☐ B. movement along

Question 4.7

4.7. What was the consumer surplus before the fire? (State your answer in millions. For example, if the base of the triangle is 10 [million units] and the height is 5, the consumer surplus is 25.)

Please enter a whole number, with no decimal point.

Question 4.8

4.8. What is the consumer surplus after the fire?

Please enter a whole number, with no decimal point.

Question 4.9

4.9. Suppose that in response to the fire and subsequent price increase, the government puts a price ceiling on gum, equal to the pre-fire price. What is the excess demand for gum? (Remember to state your answer in millions of packs.)
**Question 4.10**

4.10. What is the consumer surplus, once the price ceiling is in place? (Careful, it's not triangle-shaped.)

Please enter a whole number, with no decimal point.

**Question 4.11**

4.11. What is the deadweight loss of the price ceiling? (Note you need to think about the reduction in both consumer and producer surplus here.)

Please enter a whole number, with no decimal point.