FEEDBACK TUTORIAL LETTER

1st SEMESTER 2019

ASSIGNMENT 01

FOR

PRINCIPLES OF MICROECONOMICS
PMI511S
Dear Student

Thank you for submitting your first assignment on time. It was our pleasure to mark it. If your marks are good, I hope this will motivate you to work even harder. If you are disappointed with your marks, please do not give up now. Remember you still have one assignment to try and make up for this.

At the same time we would like to remind you that by doing your assignment on your own, and not copying it from another will only be to your benefit in the coming exams.

Remember to read thoroughly through the questions before answering, especially the multiple-choice questions. Always try to answer as completely as possible, provide all the facts. Don't simply write down the answer, but show all your calculations. Avoid making unnecessary calculation mistakes and always write down the initial formula for any calculation.

Use this opportunity to revise the questions in Assignment 1 with the memorandum in hand. Give attention to the remarks of the marker-tutor in your assignment book. If there is anything that you are still unsure of, do not hesitate to contact a market-tutor.

We hope to see you at the vacation school and we are looking forward to your next assignment.

Regards,
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ASSIGNMENT 1

SECTION A

Instruction: Please use the answer sheet at the end of this tutorial letter. Cross the alternative you select with an X.

1. A
2. B
3. C
4. A
5. A
6. C
7. A
8. B
9. A
10. D
11. A
12. A
13. B
14. A
15. D
16. A
17. D
18. B
19. C
20. D
SECTION B

QUESTION 1 [12 marks]

“Batting Sports” is a company manufacturing baseball bats and cricket bats from a special kind of wood. Table 1 represents a hypothetical production possibilities schedule for “Batting Sports”. This company has limited resources and fixed production techniques.

Table 1: Production Possibilities for “Batting Sports”

<table>
<thead>
<tr>
<th>Production</th>
<th>Baseball bats</th>
<th>Cricket bats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combination A</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Combination B</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Combination C</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Combination D</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Combination E</td>
<td>0</td>
<td>7</td>
</tr>
</tbody>
</table>

(a) Plot and label points A to E on a graph, with Baseball bats on the Y-axis and Cricket bats on the X-axis. Join the points to form the production possibilities curve (PPC) for “Batting Sports”.

(b) Now plot and label points F and G on your graph.
(c) Can “Batting Sports” produce 8 Baseball bats and 6 Cricket bats? Explain. (2)

No, they cannot. Point F falls outside the PPC and is unattainable since “Batting Sports” does not have enough resources to produce that combination of Baseball bats and Cricket bats. The PPC forms the boundary between what can be produced and what cannot be produced.

(d) Can “Batting Sports” produce 5 Baseball bats and 3 Cricket bats? What does this say about their productivity? (2)

Yes, they can. However, point G falls inside the PPC and suggests that “Batting Sports” is not using all their resources at this point of production or they are not using their resources efficiently. They can produce more than what they do at point G.

(e) When moving from points C to D, “Batting Sports” increase the production of Cricket bats from 4 to 5. What is the opportunity cost of this increase in production of Cricket bats? (1)

The opportunity cost is 2 Baseball bats (7-5 = 2)

(f) What would be the opportunity cost of producing 2 additional Cricket bats if “Batting Sports” were currently producing 5 Baseball bats and 3 Cricket bats? Explain your answer. (2)

This represents a movement from a point inside the PPC (point G) to a point on the PPC (point D). The opportunity cost is zero since not all the resources are being used at point G. There are additional resources available to increase the production of cricket bats. The production of Cricket bats can be increased without decreasing the production of Baseball bats.

(g) A veld fire completely destroys a large part of the forest from which “Batting Sports” get their special wood to make their bats. How will this affect their production possibilities curve? (1)

The PPC will shift inwards to the left, since the resources available for the production of bats have decreased.
QUESTION 2 [10 marks]

Please treat the scenarios below as separate events.

(a) A category 5 hurricane hits central Florida, wreaking havoc with the orange crop. Use supply and demand curves to illustrate and explain how these events will affect the equilibrium price and quantity of orange juice.

- The market is in equilibrium at the price $P_1$ and quantity $Q_1$. The demand curve is $D_1$ and the supply curve is $S_1$.
- The destruction of the orange crop results in a decrease in oranges available to make orange juice. The supply of orange juice decreases and the supply curve shifts to the left from $S_1$ to $S_2$.
- The equilibrium price of orange juice will increase from $P_1$ to $P_2$ and the equilibrium quantity will decrease from $Q_1$ to $Q_2$. 

![Supply and demand diagram](image-url)
(b) A new school is built in Cimbebasia, not far from a Take Away shop. Use supply and demand curves to illustrate and explain how this will affect the equilibrium price and quantity of sandwiches sold at the Take Away shop. (5)

- The market is in equilibrium at the price \( P_1 \) and quantity \( Q_1 \). The demand curve is \( D_1 \) and the supply curve is \( S_1 \).

- The market for the Take Away shop's sandwiches has grown as a result of the new school that has opened close to the shop. The demand for sandwiches increases and the demand curve shifts to the right from \( D_1 \) to \( D_2 \).

- The equilibrium price of sandwiches will increase from \( P_1 \) to \( P_2 \) and the equilibrium quantity will increase from \( Q_1 \) to \( Q_2 \).
QUESTION 3 [8 marks]

A farmer sells potatoes at N$10 per kilogram, and at that price he sells on average 43 kilograms of potatoes per month. A large number of people in the country lose their jobs because of retrenchments by the mines and the government decides to fix the prices of vegetables to make it affordable to the people. Potatoes can now only be sold for N$7 per kilogram. This results in the farmer now selling 51 kilograms of potatoes per month.

(a) Use the arc elasticity method to calculate the price elasticity of supply of potatoes.  

\[ Ed = \frac{\Delta Q}{\Delta P} \cdot \frac{1}{\frac{Q_1 + Q_2}{2}} \cdot \frac{1}{\frac{P_1 + P_2}{2}} \]

\[ Ed = \frac{8}{(43 + 51)/2} \cdot \frac{3}{(10 + 7)/2} \]

\[ Ed = \frac{8}{94} \cdot \frac{3}{17} \]

\[ Ed = \frac{8}{94} \cdot \frac{17}{3} \]

\[ Ed = \frac{136}{282} \]

\[ Ed = 0.48 \]
Based on your answer above, how would you describe the price elasticity of the supply of potatoes? Draw a graph to illustrate more or less how the supply curve for potatoes will look in this instance. (You don’t have to use the exact figures given in the example)

The Elasticity coefficient is smaller than 1 (i.e. 0.48), which means the demand is relatively inelastic.

An inelastic demand curve will look more or less as follows:

If price changes in any direction, quantity demanded will only change a little.

Do you think that the farmer will be satisfied with his financial position after the new arrangements by the government? Please explain your answer and show calculations.

Total revenue = Price x Quantity

Before: N$10 x 43kg = N$430
After: N$7 x 51kg = N$357

The farmer will not be satisfied with his new financial position. Before the government fixed the price, he was making on average N$430 per month. After the new arrangements he is now making on average only N$357 per month. His income from selling potatoes has thus decreased.