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EE211 Assignment #2 (Section 2 Semester 2/2020)

Instructions:

- Assigned date is Thursday the 4th, March 2021. **Due date is Thursday the 11th, March 2021 before 11.00 PM.**
- Submission is only received through BE Moodle platform as PDF file.
- Name your file as StudentID_nickname, such as 1234567489_Bo. **Please also comply to this instruction. It would be a lot easier to handle with your files.**
- There is no need to rewrite the question into your answer sheets. Indicating clearly question and item number is sufficient.
- Write your nickname and student ID on top-right corner of the first page.
- For those who do not have a digital device to write on, you can write your answers in sheets of paper, take pictures, convert them into a single PDF then submit in on Moodle.

1. Belle is choosing ham (h) and cheese (c), which is assumed to be substitutable goods for her. Her total utility from each product is given in the table here.

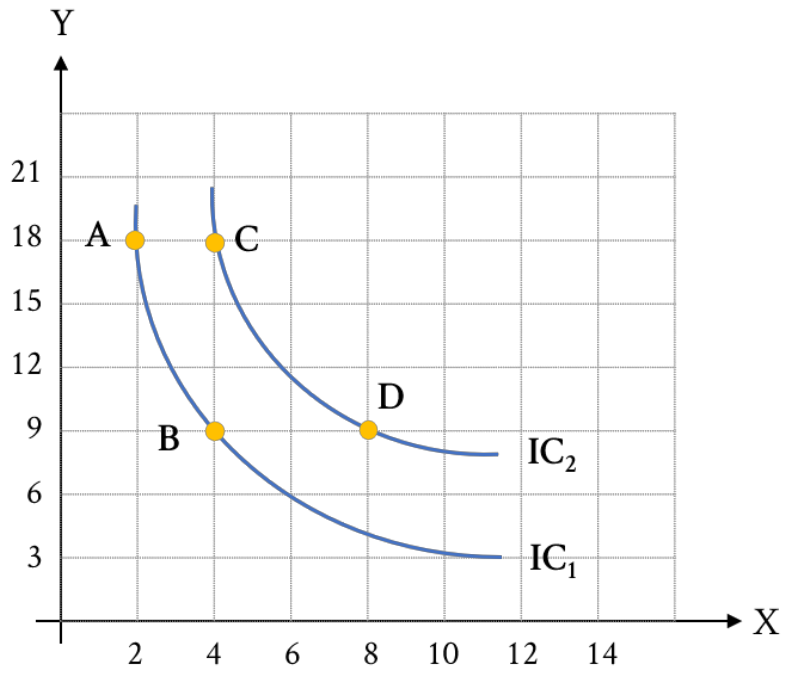
Quantity	Total utility from ham (TU_h)	Total utility from cheese (TU_c)
1	15	12
2	26	21
3	35	27
4	41	32
5	45	35
6	48	37
7	49	38

Answer the following questions.

(a) If Belle has $7 budget and both ham and cheese cost $1 each, how many units of ham and cheese she should purchase to maximize her utility? Explain your method clearly.

(b) Provide a clear explanation why her utility will not be maximized if the condition that you apply in part a. is not yet satisfied.

2. A consumer finds that for him/her avocado (X) and nuts (Y) are substitutes. Assumed that this consumer yields 8 and 12 utils on IC1 and IC2 respectively, show your work and answer the following questions.



(a) Measured from point A to B, assumed Py is 10 baht per unit, how much Px must be to make you conclude that the consumer's equilibrium is on point B?

(b) Measured from point A to B, assumed Px is 180 baht per unit, how much budget does this consumer has to achieve the equilibrium on point B?

(c) Measured from point C to point D, how much is the average marginal utility per unit of avocado?

(d) Show that this consumer's utility received from consuming avocado is in accordance with the law of diminishing marginal utility, using any essential information from any point. (But highly recommend that you consider all the points)

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1. Belle is choosing ham (h) and cheese (c), which is assumed to be substitutable goods for her. Her total utility from each product is given in the table here.

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1	15	12
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$\frac{MU_h}{P_h}$	$\frac{MU_c}{P_c}$	choice	remain budget
15	12	15/12	7-1=6
11	9	11/12	6-1=5
9	6	11/9	5-1=4
6	5	9/9	4-1=3
4	3	9/6	3-1=2
3	2	6/6	2-1=1
1	1	4/6	1-1=0

Answer the following questions.

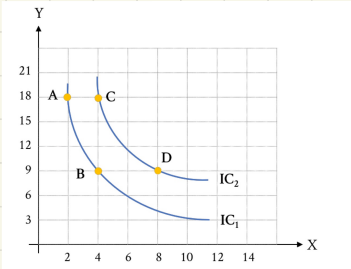
(a) If Belle has $7 budget and both ham and cheese cost $1 each, how many units of ham and cheese she should purchase to maximize her utility? Explain your method clearly.

A) belle choose 1 more unit, It will provide her net benefit, so if she buy in the amount which net benefit for each product equal to each other $\frac{MU_h}{P_h} = \frac{MU_c}{P_c}$ she can choose to buy 4 ham and 3 cheese.

(b) Provide a clear explanation why her utility will not be maximized if the condition that you apply in part a. is not yet satisfied.

B) Maximize the utility it would be MU=0 which is not presented in the table and the budget would be inefficient.

2. A consumer finds that for him/her avocado (X) and nuts (Y) are substitutes. Assumed that this consumer yields 8 and 12 utils on IC1 and IC2 respectively, show your work and answer the following questions.



(a) Measured from point A to B, assumed Py is 10 baht per unit, how much Px must be to make you conclude that the consumer's equilibrium is on point B?

A) If A and B are in consumer's equilibrium $\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$

$\frac{9}{P_x} = \frac{2}{10}$ $\therefore P_x = 45$ baht/unit

(b) Measured from point A to B, assumed Px is 180 baht per unit, how much budget does this consumer has to achieve the equilibrium on point B?

B) From (A) $\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = 180$

then $P_y = \frac{MU_y}{MU_x} \cdot P_x$

$= \frac{2}{9} \times 180$

$= 40$ baht/unit

the budget should be

$I = x \cdot P_x + y \cdot P_y$

$= 9 \cdot 180 + 9 \cdot 40$

$= 1080$ baht

(c) Measured from point C to point D, how much is the average marginal utility per unit of avocado?

C) (From C to B) This consumer gives up 9 units of nuts and her utility decrease 4 units from IC_2 to IC_1

(From B to D) This consumer gained more 4 units of avocado and gained utility more 4 units from IC_1 to IC_2 so the average MU/unit avocado $= \frac{4}{4} = 1$

(d) Show that this consumer's utility received from consuming avocado is in accordance with the law of diminishing marginal utility, using any essential information from any point. (But highly recommend that you consider all the points)

D) IC_1 (from A to B) : consumers give up 9 units of nuts to have 2 more units of avocado (2 → 4 units)

IC_2 (from C to D) : consumers give up 9 units of nuts to have 4 more units of avocado (4 → 8 units)

MU_y from 9 to 18 units equal on IC_1 and IC_2. As you can see in order to get same MU_y, consumer need to consume more avocado, therefore when consumer have more consuming in avocado, the less marginal utility in accordance with the law of diminishing marginal utility.