6404 640150

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)	MU_h	MU_c
1	15	12	15	12
2	26	21	11	9
3	35	27	9	6
4	41	32	6	5
5	45	35	4	3
6	48	37	3	2
7	49	38	1	1

Answer the following questions.

1.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.

1.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.

1.a) Both prices are $1 so $MU/P = MU$

In order to maximized her utility, $\frac{MU_b}{P_b} = \frac{MU_c}{P_c}$ and all budget spent

$6 = 6$

so she should buy 4 ham and 3 cheese.

1.b) if a condition $\frac{MU_b}{P_b} = \frac{MU_c}{P_c}$ is not yet satisfied for example

$\frac{MU_b}{P_b} = 9$ but $\frac{MU_c}{P_c} = 6$ then that is 3 ham and 3 cheese which will result with $1 left so not budget spent either so her utility are not maximized.

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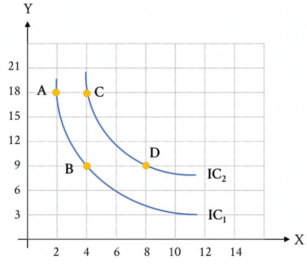
2. A consumer finds that for him/her avocado (X) and nuts (Y) are substitutes. Assumed that this consumer yields 8 and 12 utils on IC_1 and IC_2 respectively, show your work and answer the following questions.



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

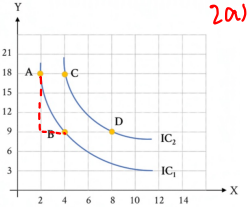
2.b) Measured from point A to B, assumed P_x is 180 baht per unit, how much budget does this consumer has to achieve the equilibrium on point B?

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

2.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)

$\left|\frac{\Delta y}{\Delta x}\right| = \frac{MU_x}{MU_y}$ $\quad \frac{MU_x}{P_x} = \frac{MU_y}{P_y}$

2.a)



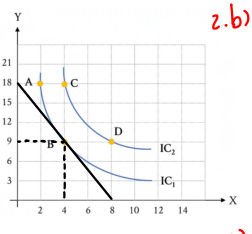
From A to B $\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{9-18}{4-2} = \left|\frac{-9}{2}\right| = \frac{MU_x}{MU_y} = \frac{P_x}{P_y}$, $P_x = \frac{MU_x}{MU_y} P_y$

$= \frac{9}{2} \cdot 10 = 45$

budget

$I = P_x \cdot x + P_y \cdot y$ $\quad MRMS_{xy} = \frac{\Delta y}{\Delta x} = \frac{P_x}{P_y}$

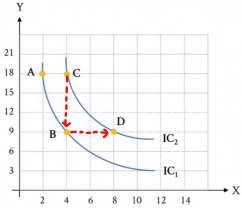
2.b)



$\frac{\Delta y}{\Delta x} = \frac{9}{2} = \frac{P_x}{P_y}$ $\quad P_y = P_x \frac{2}{9} = 180 \cdot \frac{2}{9} = 40$

$I = 180 \cdot 4 + 40 \cdot 9 = 720 + 360 = 1{,}080$

2.c) Find MU_x



From c to D $\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{9-18}{8-4} = \left|\frac{-9}{2}\right| = \frac{MU_x}{MU_y} = 9$

2.d) MU_x will decrease as consumer keep consuming avocado