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

$\frac{MU_h}{P_h}$ MU_h	$\frac{MU_c}{P_c}$ MU_c	choice	Budget
15,	12,	h_1	6
11,	9,	c_1	5
9,	6	h_2	4
6,	5	c_2	3
4	3	h_3	2
3	2	h_4	1
1	1	c_3	0

1) a) we need to find marginal utility of ham and cheese first since the consumer's equilibrium can be acheived by the condition $\frac{MU_h}{MU_c} = \frac{P_h}{P_c}$

$$\frac{MU_h}{MU_c} = \frac{TU_4^h - TU_3^h}{TU_3^c - TU_2^c}$$

$$= \frac{41-35}{27-21}$$

$$= \frac{6}{6} = 1$$

$$1 = 1$$

$I \geq P_x \cdot x$

$7 \geq 1 \cdot x$

$7 \geq x$

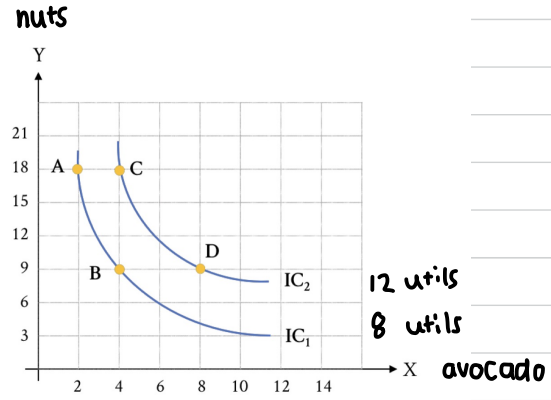
$I = 7$

$C^* = 3 \quad H^* = 4$

∴ bell can buy 3 units of ham and 4 units of cheese to maximized utility and due to walrus' law all budget must be spent.

1.b) according to walrus' law all budget must be spent so, if there's budget left, Bell hasn't reached her maximum utility yet.

2)



a) $P_y = 10$ ฿ $\quad P_x = ?$

consumer equilibrium at (4, 9)

$$MRS_{xy} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$MRS_{xy(B)} = \frac{9-18}{4-2} = \frac{-9}{2}$$

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

$$\frac{9}{2} = \frac{P_x}{10}$$

$$\frac{9}{2} \times 10 = P_x$$

$$P_x = 45 \text{ ฿}$$

2b)

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

$$I_B = 180x + 10y$$

$$I_B = 180(4) + 10(9)$$

$$I = 274 \text{ ฿}$$

2c) average MU per unit of avocado

C → B : $9 - 18 = -9$

B → D : $8 - 4 = 4$

$$C \to D = \frac{-9}{4} = 2.25$$

2d) law of diminishing utility states that MU from consuming product within a period of time diminishes as consumer keep consuming it.

at IC_1 consumer yields 8 utils while at IC_2 consumer yields 12 util