Baam 6304641837

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

With 1 more unit that she will choose, it would provide her more net benefit, so she should buy in the amount which net benefit for each product equal to each other

$\frac{MU_h}{P_h} = \frac{MU_c}{c}$ and that she can choose to buy 4 ham and 3 cheese to maximize her utility and use all the budget.

b.) To maximize the utility, it should be where $mu = 0$ which is not presented in the table. Moreover, the budget would be insufficient

a.) $MRMS = \left|\frac{\Delta y}{\Delta x}\right| = \frac{P_x}{P_y}$

$\left|\frac{13-9}{2-4}\right| = \frac{P_x}{10}$

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

$P_x = 45$ both

b.) $MRMS$; $\frac{9}{2} = \frac{180}{P_y}$

$P_y = 40$

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

$I = 120 \cdot 4 + 40 \cdot 9$

$I = 720 + 360$

$= 1080$ both

c.) Consumer yields 12 utils on IC_2 ; x = avocado, y = nut

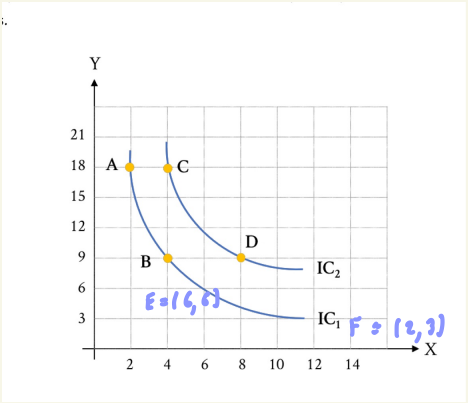
$4x + 13y = 12$ — ①

$8x + 9y = 12$ — ②

② × 2; $16x + 18x = 24$ — ③

③ − ①; $12x = 12 \rightarrow x = 1$ = Mux per unit

d.)



IC_1 : $MRS_{XY(B)} = \frac{\Delta Y}{\Delta X} = \left|\frac{13-9}{2-4}\right|$

$= \frac{9}{2} = 4.5$

$MRS_{XY(E)} = \left|\frac{9-6}{6-6}\right| = \frac{3}{2} = 1.5$

$MRS_{XY(F)} = \left|\frac{6-3}{6-12}\right| = \frac{3}{6} = 0.5$

At A → B : willing to give up more y to gain a little amount of x because MU_Y is low and MU_X is high

At E → F : willing to give up only little y to gain more x because MU_Y is getting higher and MU_X is getting lower

$MRS_{XY(B)} > MRS_{XY(E)} > MRS_{XY(F)}$ ⇒ The ratio is lower because MU_Y is getting higher and MU_X is getting lower

∴ As the consumer give up fewer and fewer units of y to get the additional units of x because the MU_X is diminishing. Therefore the law of diminishing marginal utility is applied.