

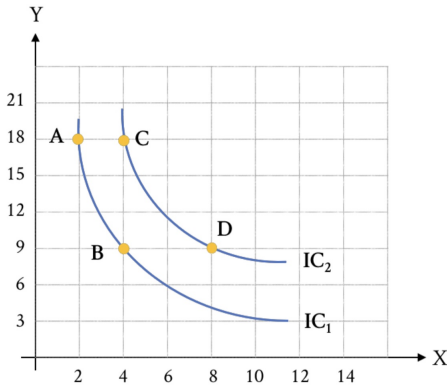
① a) $x = \text{ham}$, $y = \text{cheese}$

I	x,y	MU _x	MU _y	MU _x /P _x	MU _y /P _y	Choice	Remaining budget
7	1	15	12	15	12	x_1, y_1	$7-1=6$
	2	11	9	11	9	x_2, y_1	$6-1=5$
	3	9	6	9	6	x_2, y_2	$5-1=4$
	4	6	5	6	5	x_3, y_2	$4-1=3$
	5	4	3	4	3	x_4, y_2	$3-1=2$
	6	3	2	3	2	x_4, y_3	$2-1=1$
	7	1	1	1	1	x_5, y_3	$1-1=0$

∴ She should purchase 4 units of ham and 3 units of cheese to maximize her utility (Use cardinal approach) #

b) Because of the budget constraint, she cannot reach her utility to maximized her satisfaction (Walras' Law) #

②



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

$\left| \frac{18-9}{2-4} \right| = \frac{P_x}{10}$

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

$P_x = 45 \text{ baht}$ #

b) $MRMS; \frac{9}{2} = \frac{180}{P_y}$
 $P_y = 40$

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

$I = 180 \cdot 4 + 40 \cdot 9$

$I = 720 + 360$

$= 1,080 \text{ baht}$ #

* C) Consumer yields 12 utils on IC_2 ; $x = \text{avocado}$, $y = \text{nut}$

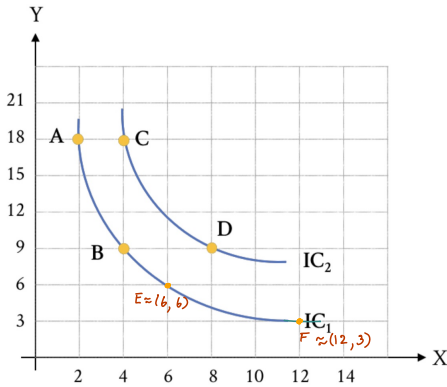
$$4x + 18y = 12 \quad \text{--- (1)}$$

$$8x + 9y = 12 \quad \text{--- (2)}$$

$$\text{(2)} \times 2; 16x + 18y = 24 \quad \text{--- (3)}$$

$$\text{(3)} - \text{(1)}; 12x = 12 \rightarrow x = 1 = MU_x \text{ per Unit \#}$$

d)



$$IC_1: MRS_{xy}(B) = \frac{\Delta y}{\Delta x} = \left| \frac{18-9}{2-4} \right| = \frac{9}{2} = 4.5$$

$$MRS_{xy}(E) = \left| \frac{9-6}{4-6} \right| = \frac{3}{2} = 1.5$$

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

At $A \rightarrow B$: willing to give up more y to gain a little amount of x because MU_y is low and MU_x is high

At $E \rightarrow F$: willing to give up only little y to gain more x because MU_y is getting higher and MU_x is getting lower

$MRS_{xy}(B) > MRS_{xy}(E) > MRS_{xy}(F) \Rightarrow$ The ratio is lower because MU_y is getting higher and MU_x is getting lower

\therefore 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. #