

1 a) Belle can maximize total utility when she uses all budget and meet the condition of consumer's equilibrium where the marginal utility per dollar of both goods (given price of both goods per unit is \$1) are equal.

| HAM | | | | Cheese | | | |
|-----|----|----|----------------|--------|----|----|----------------|
| Q | TU | MU | $\frac{MU}{P}$ | Q | TU | MU | $\frac{MU}{P}$ |
| 1 | 15 | 15 | 15 | 1 | 12 | 12 | 12 |
| 2 | 26 | 11 | 11 | 2 | 21 | 9 | 9 |
| 3 | 35 | 9 | 9 | 3 | 27 | 6 | 6 |
| 4 | 41 | 6 | 6 | 4 | 32 | 5 | 5 |
| 5 | 45 | 4 | 4 | 5 | 35 | 3 | 3 |
| 6 | 48 | 3 | 3 | 6 | 37 | 2 | 2 |
| 7 | 49 | 1 | 1 | 7 | 38 | 1 | 1 |

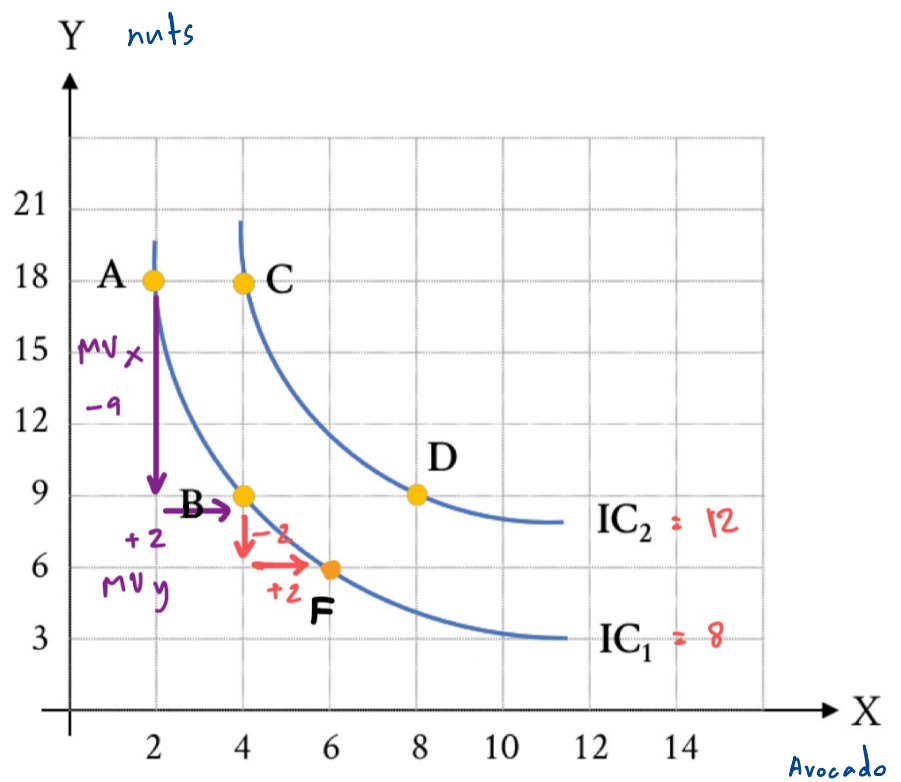
Since Belle has \$7 budget income, the quantity of goods she can maximize her purchased is 7 units

So, the possible spending with a limited budget will be at the quantity where give her the most $\frac{MU}{P}$, which is at 4 units of ham and 3 units of cheese.

1b) To maximize utility, the condition of consumer's equilibrium need to be met, consumer will spend at the point where the budget line intersect the indifference curve or $MRS = MRM$.

Therefore, the market basket in question 1a) is not yet satisfied the condition

due to limited amount of income and quantity she can purchase for cheese and ham.



$$2a) \quad -\frac{MV_x}{MV_y} = \frac{P_x}{P_y}$$

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

$$P_x = 45 \text{ baht per unit}$$

$$2b) \quad \text{Find } P_y ; \quad -\frac{MV_x}{MV_y} = \frac{P_x}{P_y}$$

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

$$P_y = 40$$

At point B ;

$$\begin{aligned} I &= P_x X + P_y Y \\ &= 180(4) + 40(9) \\ &= 720 + 360 \\ &= 1080 \end{aligned}$$

\therefore the budget is 1080 baht

2c)

It can be seen that at point B to D, consuming more 4 units of avocado, consumer gains additional utility 4 units (12-8).

So, at point C to D, the consumer buy more the same amount of avocado, consuming more 4 units of avocado will also gain additional 4 units of utility.

The average marginal utility per unit of avocado is $\frac{4}{4} = 1$

2d) When the consumer change its market basket from point A to B,

the consumer is willing to give up 9 nuts to consume more 2 units of avocado.

On the other hand, when the consumer change preference from B to F (as shown in the graph)

, the consumer is willing to give up only 2 nuts to consume more 2 units of avocado.

Therefore, consumer is willing to give up less and less amount of nuts to increase additional unit consumed of avocado. So, the additional satisfaction of consuming avocado will be diminish. The law of diminishing marginal utility is occurred.