

Bady

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1. a.

h, c	MU_h	MU_c
1	15	12
2	11	9
<u>3</u>	9	<u>6</u>
<u>4</u>	<u>6</u>	5
5	4	3
6	3	2
7	1	1

Condition $\frac{MC_h}{P_h} = \frac{MU_c}{P_c}$

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

Thus, Belle can maximize her utility with \$7 by buying 4 hams and 3 cheese.

b. Her utility will not be maximized if $\frac{MU_h}{P_h} \neq \frac{MU_c}{P_c}$ because she will get too little or too many of each goods.

3. a. Find P_x

$$\begin{aligned} MRS_{x,y}(A \rightarrow B) &= \left| \frac{\Delta y}{\Delta x} \right| = \frac{MU_x}{MU_y} \\ &= \left| \frac{18-9}{2-4} \right| = \left| -\frac{9}{2} \right| = 4.5 \end{aligned}$$

$$\Rightarrow \frac{MU_x}{MU_y} = 4.5 \Rightarrow 4.5 MU_y = MU_x$$

B is consumer's equilibrium: $\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$

$$\Rightarrow P_x = \frac{MU_x P_y}{MU_y} = \frac{4.5 MU_y \times 10}{MU_y} = \underline{45 \text{ baht/unit}}$$

b. budget the consumer has to achieve equilibrium on point B

$$\left| \frac{\Delta y}{\Delta x} \right| = \left| \frac{18-9}{2-4} \right| = \left| \frac{9}{-2} \right| = 4.5$$

$$\frac{P_x}{P_y} = \left| \frac{\Delta y}{\Delta x} \right| = 4.5 \Rightarrow P_y = \frac{P_x}{4.5} = \frac{180}{4.5} = 40 \text{ baht/unit}$$

$$\text{Budget} = P_x \cdot x + P_y \cdot y = 180 \times 4 + 40 \times 9 = \underline{1080 \text{ baht}}$$

c. find the average marginal utility per unit of avocado (x)

$$MRS(C \rightarrow D) = \left| \frac{\Delta y}{\Delta x} \right| = \left| \frac{18-9}{4-8} \right| = \underline{2.25}$$