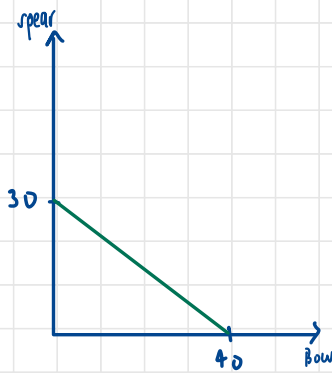


①

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1.a



$$\text{Spear } \frac{120}{40} = \frac{36}{1} = 30 \text{ units}$$

$$\text{Bow } \frac{120}{30} = \frac{40}{1} = 40 \text{ units}$$

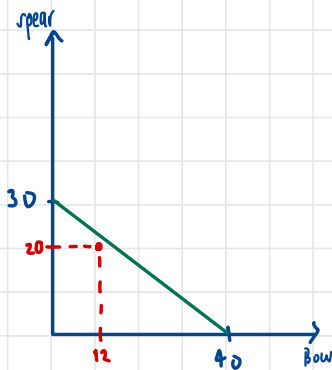
1.b

30 spears, 40 bows

$$\frac{40}{30} = 1.33$$

∴ it will cost 1.33 bows

1.c



$$\text{Spear } 20 \times 4 = 80$$

$$\text{Bow } 12 \times 3 = 36$$

$$\text{Woods } 120 - 80 - 36 = 4$$

* it is feasible

1.d

PPC is tilted counter-clockwise

$$\frac{120}{1.5} = 80 \text{ units}$$

The opportunity cost for a spear

$$\frac{80}{30} = 2.66$$

It is increased.

2

2.a

price change $\frac{29-42}{42} \approx -0.31 \rightarrow 31\%$

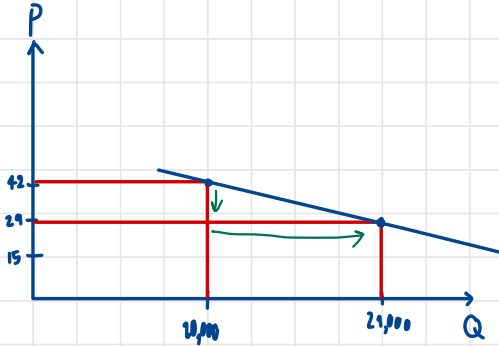
number of passengers increased $\frac{21,000 - 20,000}{20,000} = \frac{1}{20} = 5\%$

The price elasticity of demand for MRT Purple line is

$\frac{0.05}{-0.31} \approx -0.16$

it is inelastic

2.b



if change from 29 to 15 baht
it will help to increasing total revenue
but in a small proportion

③ 3.a Price elasticity of demand

$$\frac{\frac{90-80}{80}}{\frac{25-20}{20}} = \frac{-0.5}{0.25} = -2$$

Price elasticity of supply

$$\frac{\frac{100-80}{80}}{\frac{25-20}{20}} = \frac{0.25}{0.25} = 1$$

3.b Consumer Surplus = $\frac{1}{2} \times 80 \times 10 = 400$

Producer Surplus = $\frac{1}{2} \times 80 \times 20 = 800$

④ 4.a consumer equilibrium condition : $\frac{MU_x}{MU_y} = \frac{P_x}{P_y}$

A to B, $P_y = 10$

$$\therefore \left| \frac{\Delta y}{\Delta x} \right| = \frac{P_x}{P_y}$$

$$= \left| \frac{11-9}{2-4} \right| = \frac{P_x}{10}$$

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

$$P_x = 45$$

4.b consumer equilibrium condition : $\frac{MU_x}{MU_y} = \frac{P_x}{P_y}$
A to B, $P_x = 180$

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

$$\therefore \left| \frac{11-9}{2-4} \right| = \frac{180}{P_y}$$

$$= \frac{9}{2 \times 180} = \frac{1}{P_y}$$

$$P_y = 0.025$$

4.c from point c to B, $\Delta x = 4-4=0$

B to D, $\Delta x = 4-8=-4$

$\therefore$ from point c to D, the average marginal utility per unit of avocado = 4

4.d

(avocado)
According to law of diminishing utility, MU from consuming product X diminishes as the quantity of avocado consumer consume increase. Based on the graph, point A on IC₁ there're small value of x (high MU_x) and as value of x increases MU_x decreases as in point C.