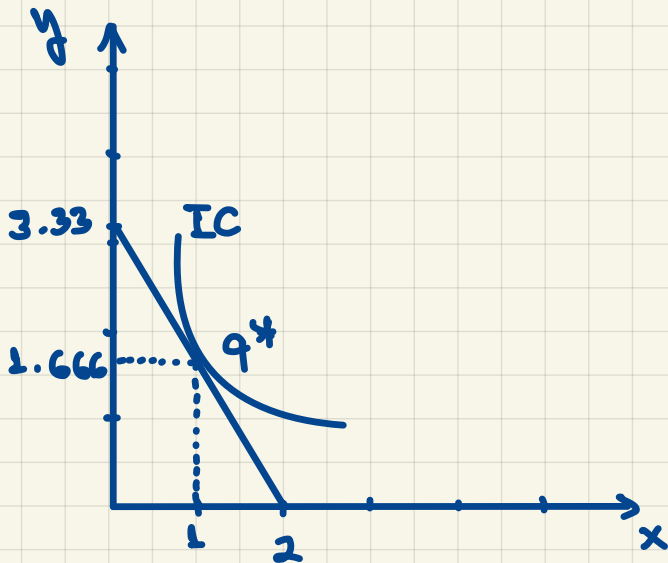


Bady 6304850032

1. a. let x represent going to the Maldives
 y represent going to Thailand



Budget : 10,000 THB

$\approx 3.33 \dots$ trips to Thailand

= 2 trips to the maldives

Utility Maximized at Equilibrium:

$$\text{when } MRS = MRMS = \frac{\Delta y}{\Delta x} = \frac{P_x}{P_y} = \frac{5000}{3000} \approx 1.666$$

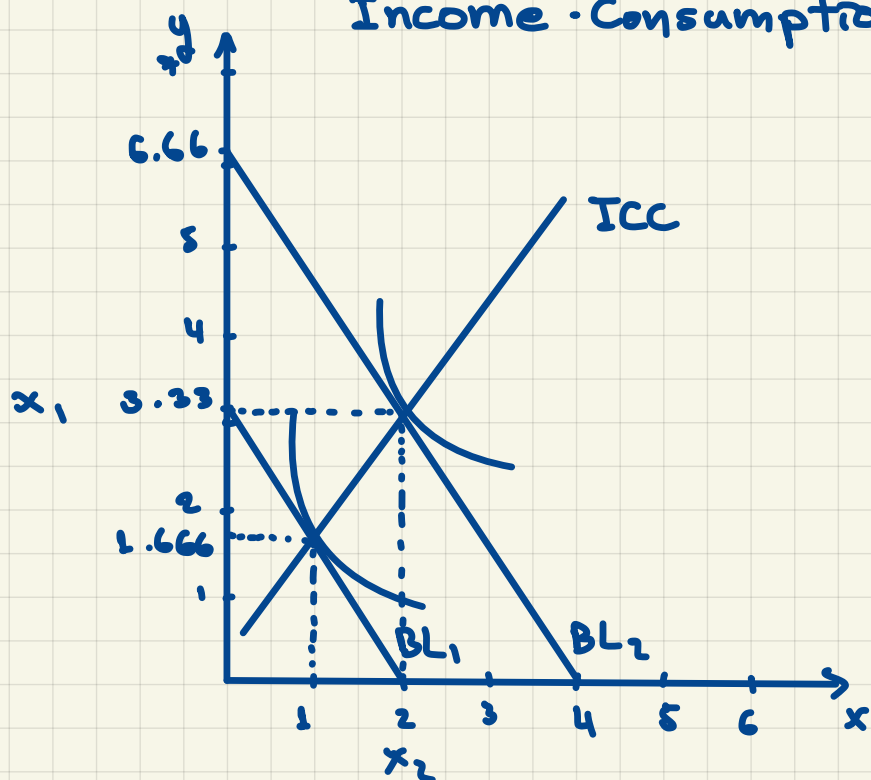
\Rightarrow He will choose to the bundle of going to the maldives 1 time and Thailand 1.667 times because the bundle is optimal for his budget: IC is tangent to budget line.

b. Budget: 20,000 THB

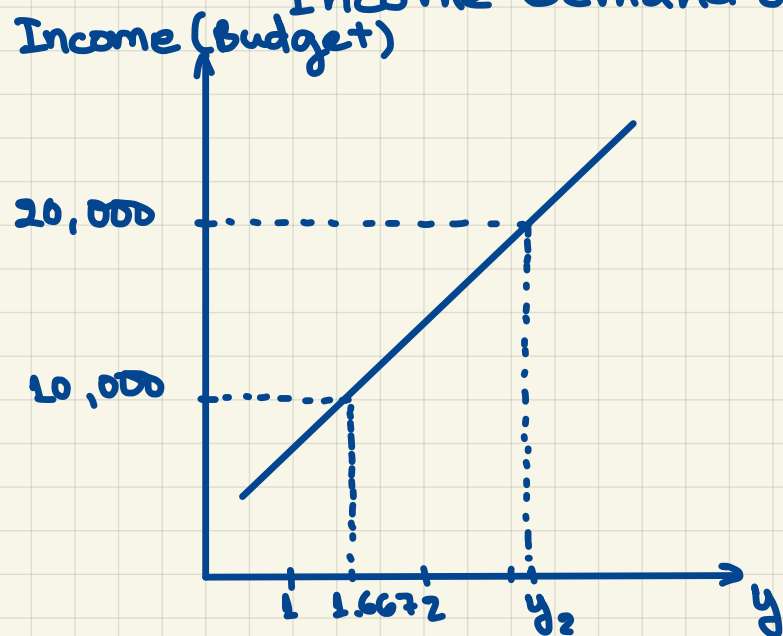
~ 6.66 trips to Thailand

= 4 trips to the Maldives

Income-Consumption Curve



Income Demand of Traveling to Thailand



The graph has a positive slope indicating that the product is a normal product.

2. a. - Calculate MRTS

$$|MRTS| = \left| \frac{\Delta K}{\Delta L} \right| = \frac{MP_L}{MP_K} = \frac{6}{8} = 0.75$$

However, K and L are substitutes meaning if $K^{\uparrow} \rightarrow L^{\downarrow}$ and vice versa. It also means ΔK is negative when K^{\downarrow} and ΔL is negative when L^{\downarrow} . (ΔK positive when K^{\uparrow} , ΔL positive when L^{\uparrow})

\Rightarrow MRTS is negative

$$\Rightarrow \boxed{MRTS = -0.75}$$

- Cost minimization conditions:

$$|MRTS| = |MRMS| = \left| \frac{\Delta K}{\Delta L} \right| = \frac{w}{r}$$

- Interest rate at equilibrium

$$|MRTS| = |MRMS| = \frac{w}{r} = 0.75, w = 3$$

$$\Rightarrow \boxed{r = \frac{3}{0.75} = \$4}$$

$$b. \quad TC_1 = rK + w_1L$$

$$TC_2 = rK + w_2L$$

3. a. LRAC will shift downward signaling a decrease in cost due to the subsidy.

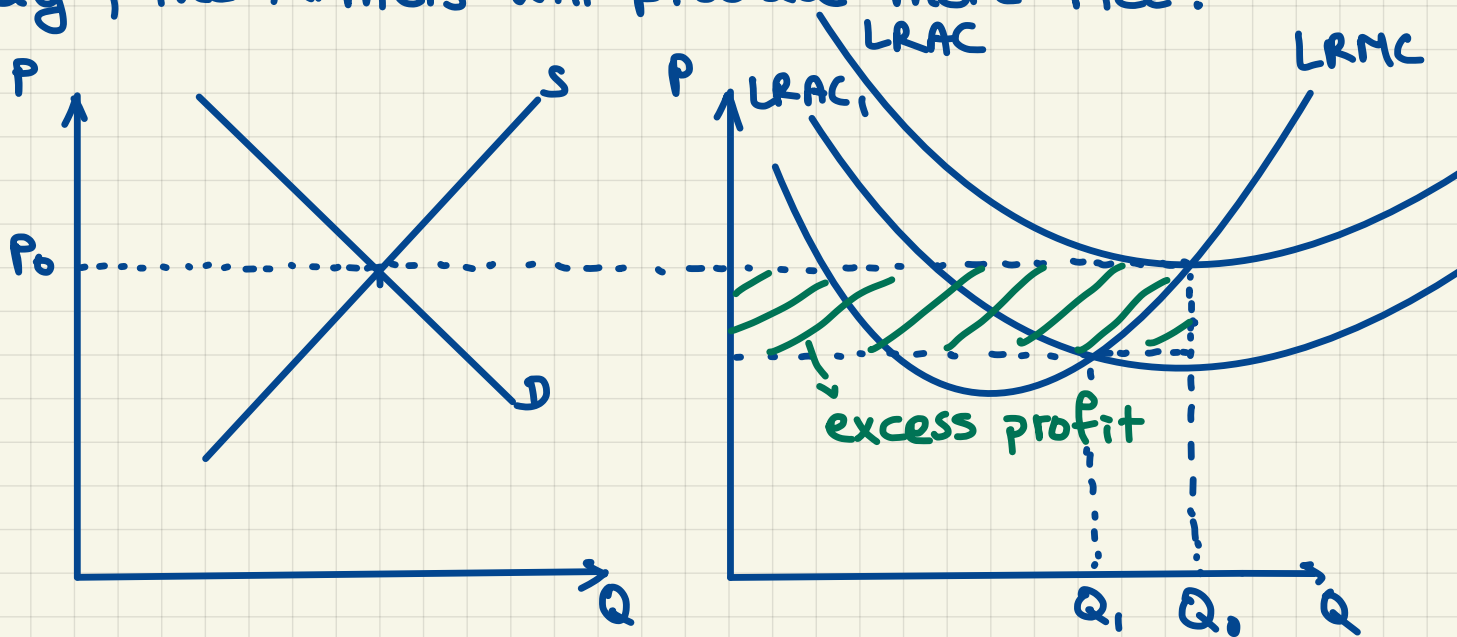
Subsidy is equally used to subsidize each of every product production cost thus marginal cost in producing another product stays the same.

Illustration: let s be subsidy for each product production cost

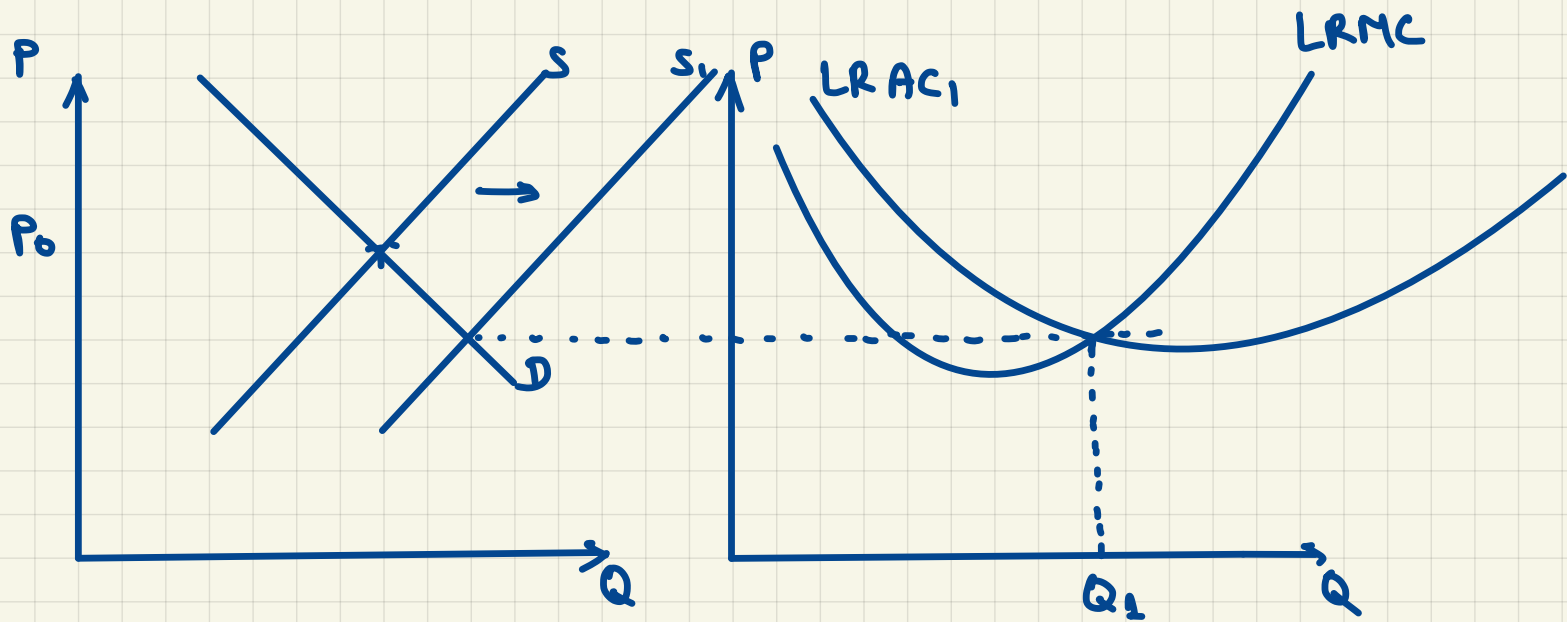
$$\begin{aligned} C_2 - C_1 &= (C_2 - s) - (C_1 - s) \\ &= C_2 - s - C_1 + s \end{aligned}$$

$$\Rightarrow C_2 - C_1 = C_2 - C_1 \quad \text{checks out}$$

b. With the cost of production decreasing due to the subsidy, the farmers will produce more rice.



c.



When costs go down, farmers are incentivized to produce more rice and outsiders are incentivized to enter the market and start producing rice too, thus driving the supply up moving the supply line to the right. Now at Q_1 , all farmers make normal profit again instead of excess profit.

4. a. D: $P(Q) = 100 - 5Q$

→ D is linear demand, thus MR is twice as steep as D.

→ MR: $P_{MR} = 100 - 10Q$

Profit Maximization Condition: $MR = MC$

or $MR = 20$

↳ $100 - 10Q = 20$

⇒ $Q^* = \frac{20 - 100}{-10}$

$Q^* = 8$

Product cost = $100 - 5(8) = \$60$

b. Since $VC = MC$

⇒ $TVC = 8 \times 20 = \$160$

c. $\pi = TR - TC$

$TC = TFC + TVC = 160 + 160 = \320

$TR = Q^* \cdot P = 8 \times 60 = \480

⇒ $\pi = 480 - 320 = \$160$

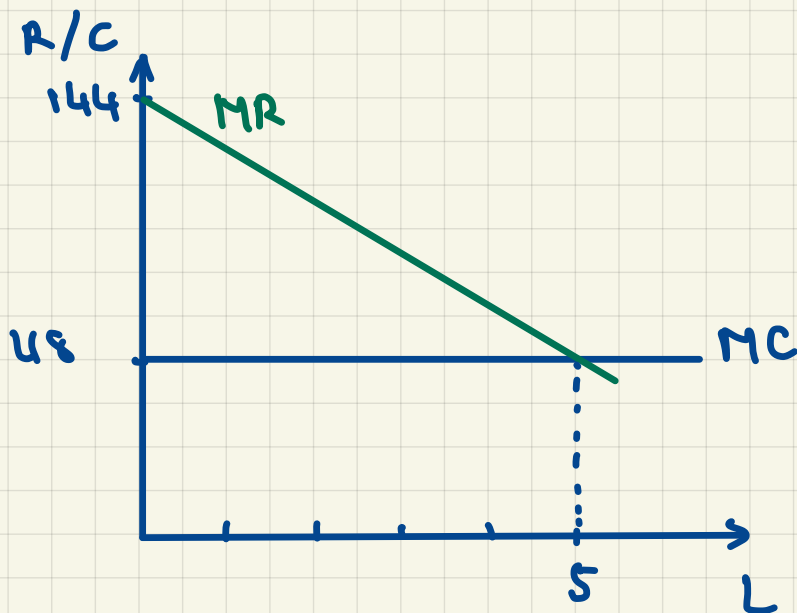
5. a. Profit Maximization Condition :

Produce until $MR = MC$

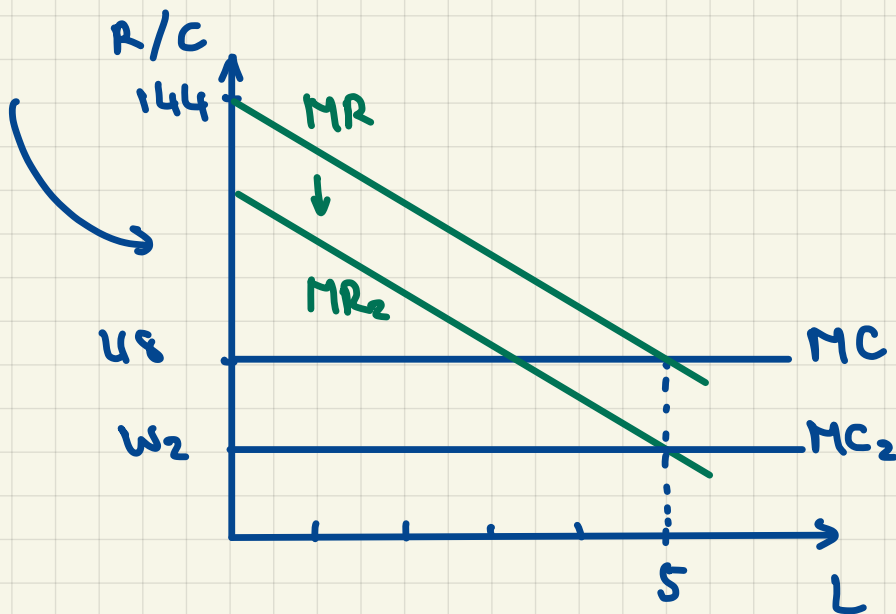
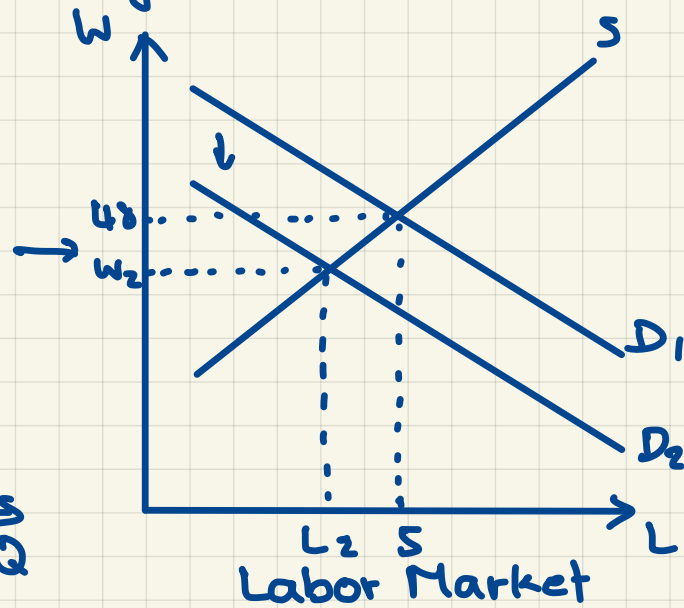
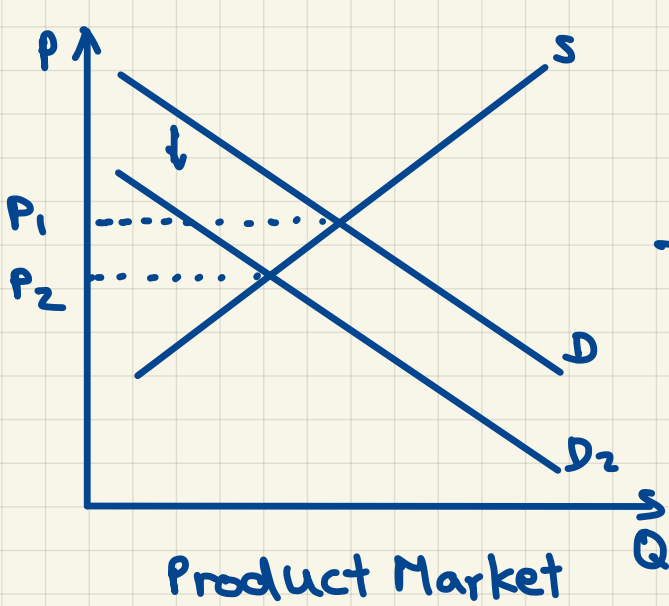
Unit of labor	MPL	MC	MR
2	12	48	144
3	8	48	96
4	6	48	72
5	4	48	48
6	2	48	24

$MR = MPL \times P$

Since $MR = MC$ at 5 units of labor, the firm will choose to input 5 units of labor.



b. Demand going downward would mean that the equilibrium of the product market would be at a lower price and quantity. Lower price leads to lower marginal revenue, thus less units of labor are needed to satisfy profit maximization condition $MR = MC$ with also less wage.



6. a. "People feel that price level is hiking." is not market failure because price only reflects the equilibrium of demand and supply.

b. "Morpheus always hear a loud fighting from a room next to his." is a problem of public goods because it can't be guaranteed that Morpheus can solve it.

c. "Trinity does not receive her full-benefit until her first 3-month of her work position." is a moral hazard because the employer wants to ensure behavioral shift is kept at minimum after signing work contract.

d. "In Chiang Mai, there is no earthquake alarm system" is adverse selection because authorities might be notified of earthquakes but people are not, making one party have information than the other.

e. "Starbucks coffee is more expensive than Amazon coffee" is market power because Starbucks has to be a larger entity to be able to charge a higher price.