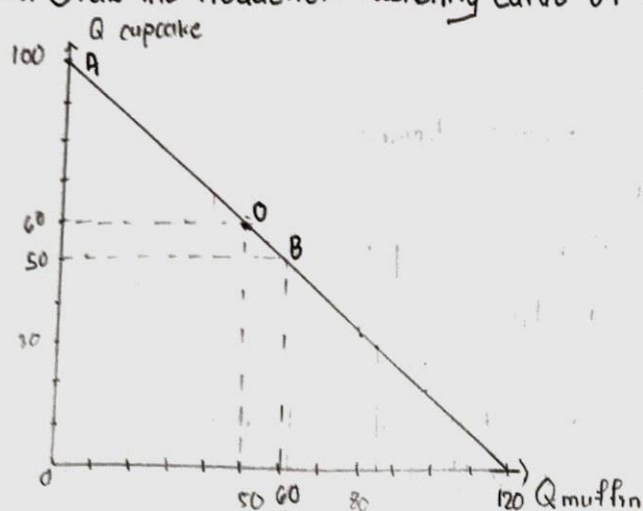


Answer

1. (a). Draw the Production Possibility Curve of this baker



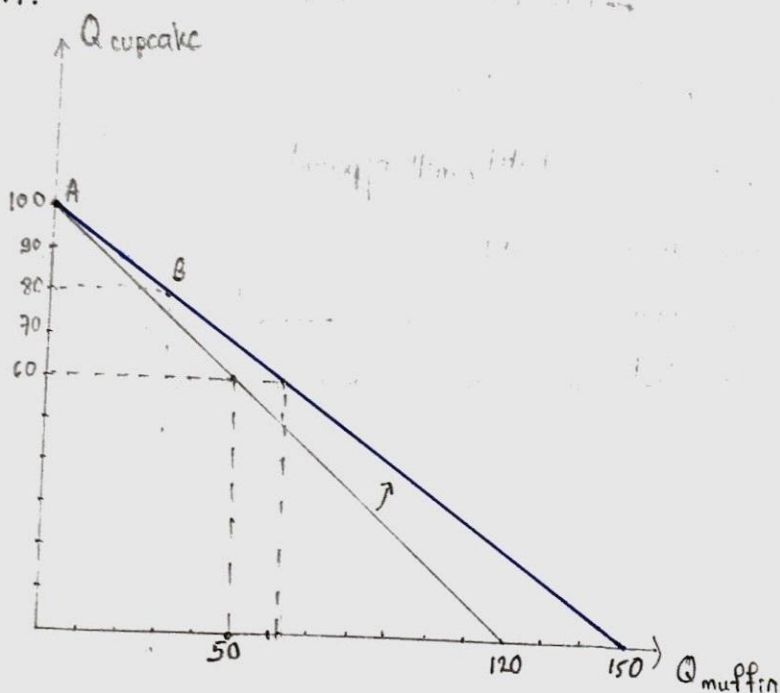
The opportunity cost of each cupcake would be $\boxed{1.2 \text{ of muffin}}$. From the graph above, move from $A \rightarrow B$, $(0, 100) \rightarrow (60, 50)$, we have +60 muffins and -50 cupcake.

Thus, if we want +1 cupcake, we will have -1.2 muffin.

- (b). With her available resources, this baker can make 60 cupcakes and 50 muffins.

Based on PPC graph, at 60 of cupcakes and 50 muffins share the ^{same} intersection (O) on the straight line, the PPC line, so it means that this baker has sufficient resources to produce 60 cupcakes and 50 muffins.

(X).



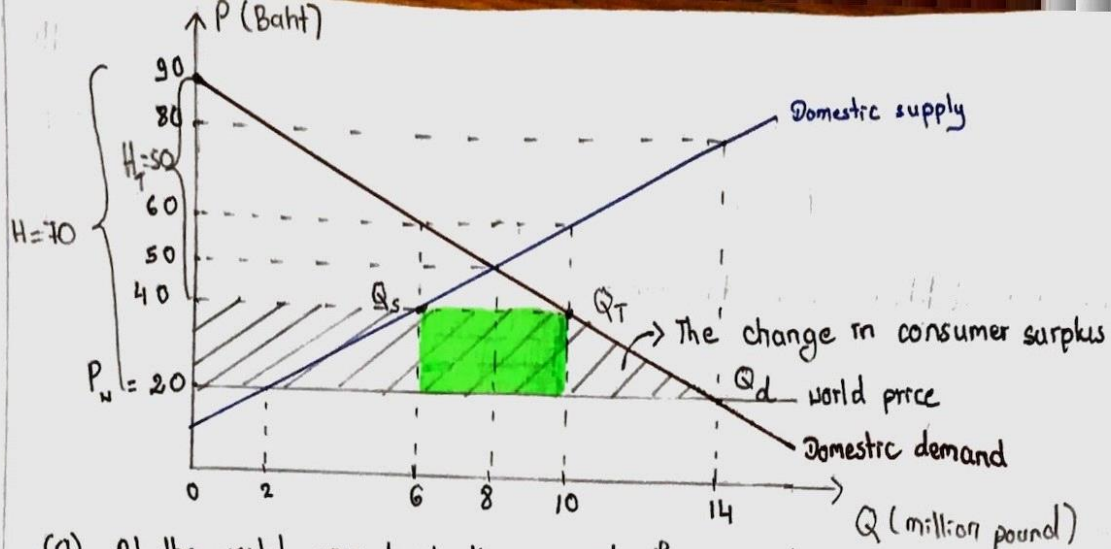
The opportunity cost ~~will be~~ 1.5 of each cupcake is $\boxed{1.5 \text{ of muffin}}$

from graph, if we move $A \rightarrow B$, $(0, 100) \rightarrow (30, 80)$, we have +30 muffins, -20 cupcake

If we want +1 cupcake, we will have -1.5 muffin.

$\Rightarrow$ The opportunity cost of each cake increase by $1.5 - 1.2 = \boxed{0.3}$

2.



(a). At the world price level, the amount of imported sugar is 12 million pound

All domestic demand - Domestic supply at P_w

(b). If the government collect import unit tax 20 baht per pound and the price after tax is 40

(c). Thus, the ~~sugar is~~ domestically produced sugar in Thailand is 6 million pound

(d). After the import tax is imposed, the change in consumer surplus ~~is~~

$$\frac{1}{2} (H_T \times Q_T) = \frac{1}{2} (50 \times 10) = 250$$

. Before the import tax is imposed, $CS = (H \times Q_d) \frac{1}{2} = (70 \times 14) \frac{1}{2} = 490$ million Baht

. After the import tax is imposed, $CS = (H_T \times Q_T) \frac{1}{2} = (50 \times 10) \frac{1}{2} = 250$ million Baht

. The change in CS is $250 - 490 = -240$

Thus, the domestic consumers are worse off because they ~~will~~ lose some amount of surplus by consuming sugar at higher price ~~to~~ but getting ~~it~~ in lower quantity.

(e). Compute the government revenue from the import tax

$$T \times (Q_T - Q_S) = 20 \times (10 - 6) = 80 \text{ million Baht}$$

The area ~~highlighted~~ highlighted in green above represents government revenue because the government can get the tax from the imported sugar. Since the domestic ^{demand} supply exceeds the domestic supply, sugar is needed to be imported. Once sugar is imported, the government will get revenue from the tax.

3. (a). Calculate the price elasticity of demand at the New price.

$$E_d = \frac{\Delta Q}{\Delta P} \cdot \frac{P_1}{Q_1} = \frac{P_1}{Q_1} \cdot \frac{Q_2 - Q_1}{P_2 - P_1} = \frac{20}{5000} \cdot \frac{3000 - 5000}{25 - 20} = -\frac{8}{5} = -1.6\%$$

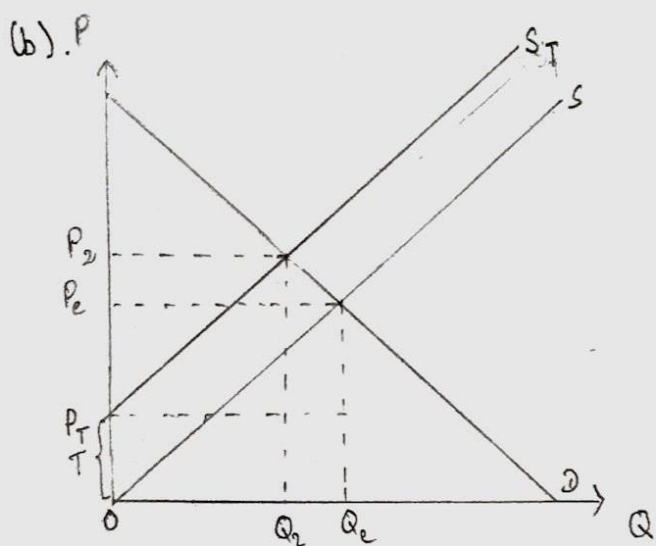
(b). The total sale ^{revenue} would ~~be~~ decrease because sweetened green tea is elastic good. Hence, when the price goes up, the quantity demanded goes down, and this results in bigger amount of lost revenue than the gained revenue. In another word, it means that the price increase is not enough to cover the ~~reduced~~ decreased quantity.

(c). ~~Calc~~ Calculate the cross-price elasticity of demand for "Super Drink"

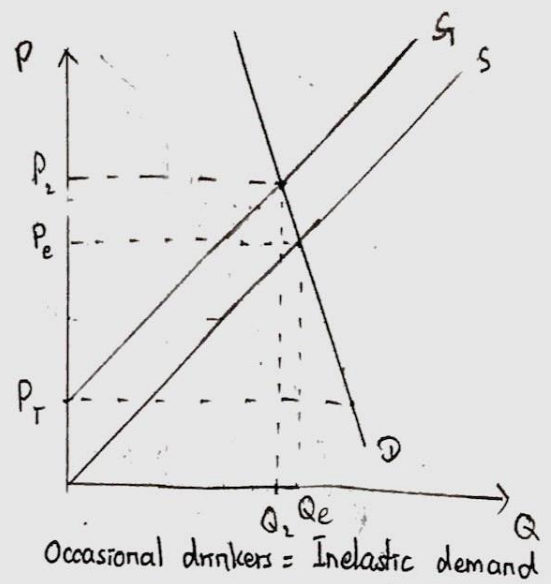
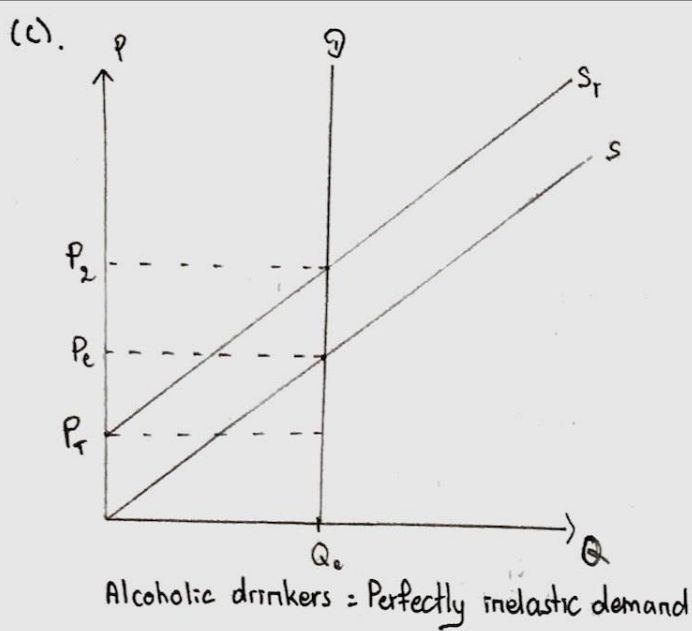
$$E_d = \frac{\Delta Q_{SD}}{\Delta P_{GT}} \cdot \frac{P_{GT}}{Q_{SD}} = \frac{3000 - 2500}{25 - 20} \cdot \frac{20}{2500} = \frac{4}{5} = 0.8\%$$

(d). From part (c), sweetened green tea and Super Drink are substitutes because when the price of sweetened green tea increase, the quantity demanded for sweetened green tea decrease but quantity demanded for Super Drink increase, which means the consumers may leave sweetened green tea market and ~~participate~~ participate in Super Drink market instead since it is substitutable for the green tea.

4. (a). I think this market will have the new equilibrium point in which the equilibrium price ~~stay~~ remains the same, but the quantity demanded decreases (shifting to the left). This results from the consumers preference. If there is ~~advertisement~~ about a campaign showing how bad alcoholic beverages can affect health, the consumers will consider about their health; therefore, the consumers may purchase less of alcoholic ~~product~~ beverages because they do not want to harm their health.



If the government decides to collect unit tax on sellers, the sellers will increase the price by reduce the quantity supplied. Thus, there will be new equilibrium price at P_2 ~~after the tax is imposed~~ which is higher than the old one P_e ; however, there will be new ~~qu~~ traded quantity as well which is lower than the old one Q_e . Furthermore, even consumers buy at P_2 , the producers gain only at P_T because the producers have to pay tax for the government.



The unit tax affects both group differently.

- For alcoholic drinkers, they have perfectly inelastic demand for alcoholic beverages, so even if the producers raise the price, they still have the willingness to pay at higher price than equilibrium price, P_e for the same amount for quantity supplied (Q_e).
- For occasional drinkers, they have inelastic demand for alcoholic beverages, so when the producers increase the price, their ~~ing~~ willingness to pay drops slightly. Thus, there are new equilibrium price (P_2) and new traded quantity (Q_2).