Exercise 1

1. You are considering the number of hamburgers that you plan to order. Based on the following table, complete the table and answer the following questions.
    a. How many units of hamburgers should you order? Why?
    b. Suppose you decide to order 2 hamburgers. Is this underallocation or overallocation? Explain. How much is your deadweight loss?
    c. Suppose you decide to order 5 hamburgers. Is this underallocation or overallocation? Explain. How much is your deadweight loss?

Quantity	Total Benefit	Marginal Benefit	Total Cost	Marginal Cost	Total Net Benefit
1st		80		20	
2nd		60		20	
3rd		40		20	
4th		20		20	
5th		0		20	

2. With diagrams, explain the differences between tariff and quota. Also, explain the impact on domestic stakeholders (consumers, producers, and government), i.e., who is better off and who is worse off? Why?
3. Consider an exporting country. Analyze welfare effect on all stakeholders when its government impose "Export Tax", i.e., per-unit tax imposed on the exported good. Draw a diagram(s) and provide complete analysis on who gain(s) and who lose(s).
4. A "small", open economy is engaging in international trade. Its domestic demand curve is given by $P = 100 - Q$ and its domestic supply curve is given by $P = Q$. The world price of the good is 20$. Answer the following questions.
    a. What does it mean for a country to be "small"? What implication of being "small" has on the world supply curve?
    b. Is this economy either an exporting or important country? Why? How many units of the goods is the country is currently importing or exporting?
    c. Now suppose the government decides to intervene. If the country is importing, the government will impose import tariff of 10$ per unit. If the country is exporting, the government will impose export subsidy of 10$ per unit. Calculate
        i. Domestic consumer and producer surplus after the intervention
        ii. Either subsidy cost or tariff revenue
        iii. Deadweight loss from the intervention.

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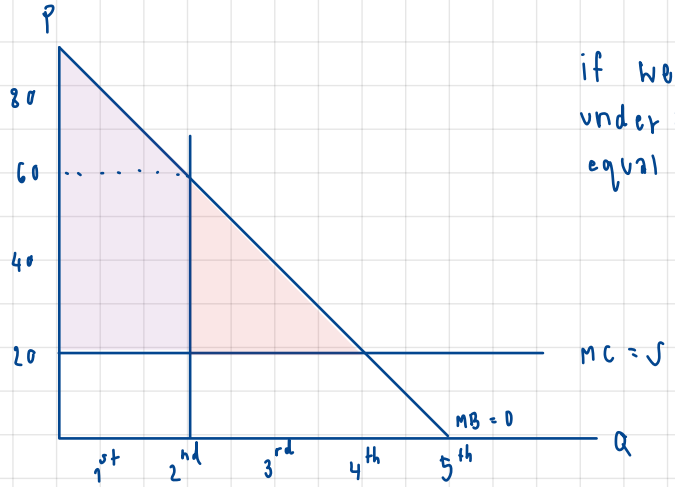
   c. Suppose you decide to order 5 hamburgers. Is this underallocation or overallocation? Explain. How much is your deadweight loss?

Quantity	TB Total Benefit	Marginal Benefit	TC Total Cost	Marginal Cost	TB - TC Total Net Benefit
1st	80	80	20	20	80-20 = 60
2nd	140	60	40	20	140-40 = 100
3rd	180	40	60	20	180-60 = 120
4th	200	20	80	20	200-80 = 120
5th	200	0	100	20	200-100 = 100

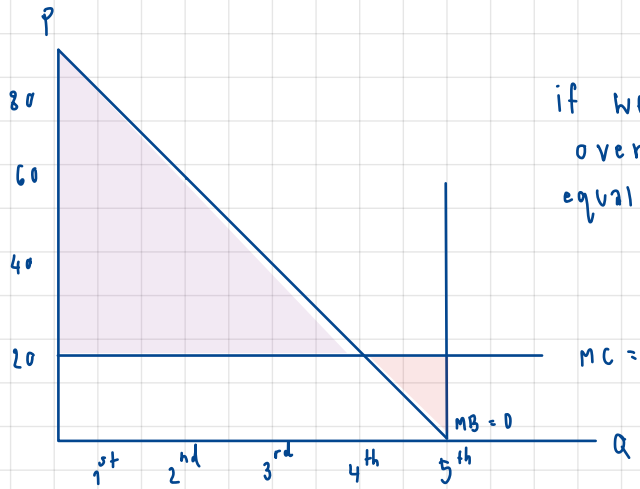
a.) We should order 4 units of hamburgers because we should order untill maginal benefit greater or equal to the marginal cost.

b.)



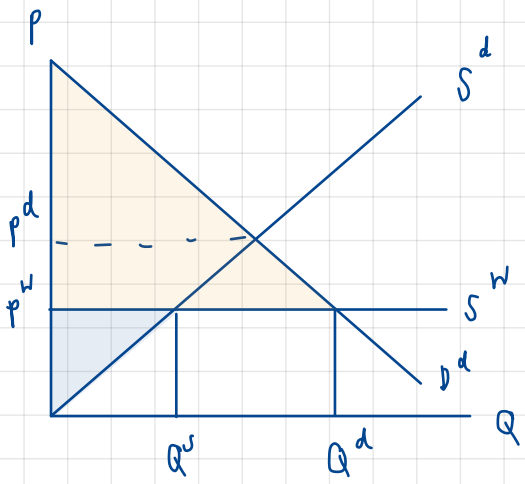
if we decide to order 2 hamburgers, it is underallocation and the deadweight loss is equal to $\frac{1}{2} \times 2 \times (60-20) = 40$.

c.)

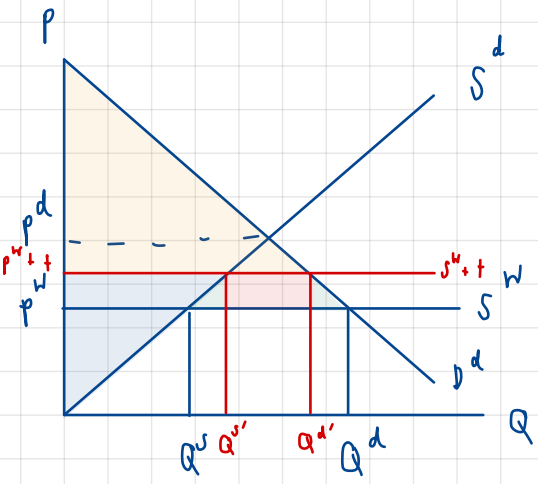


if we decide to order 5 hamburgers, it is overallocation and the deadweight loss is equal to $\frac{1}{2} \times 1 \times 20 = 10$.

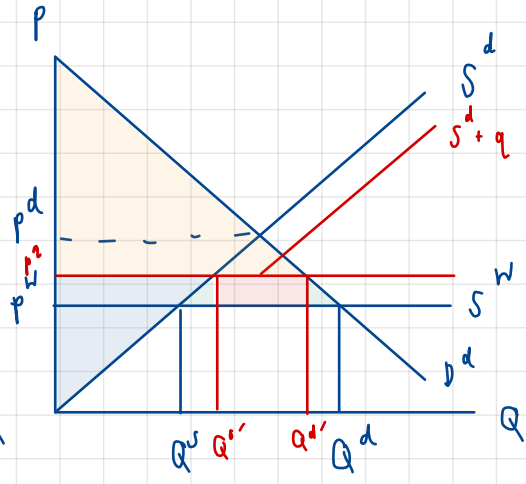
2. With diagrams, explain the differences between tariff and quota. Also, explain the impact on domestic stakeholders (consumers, producers, and government), i.e., who is better off and who is worse off? Why?



Without tariff and quota



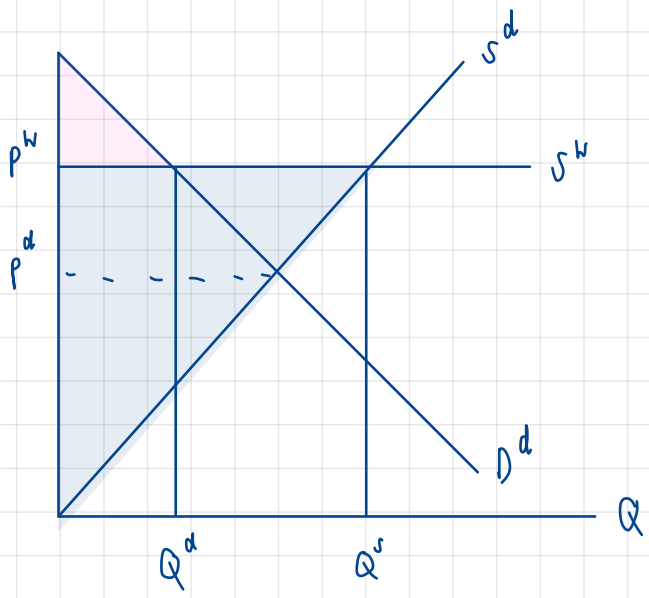
With tariff



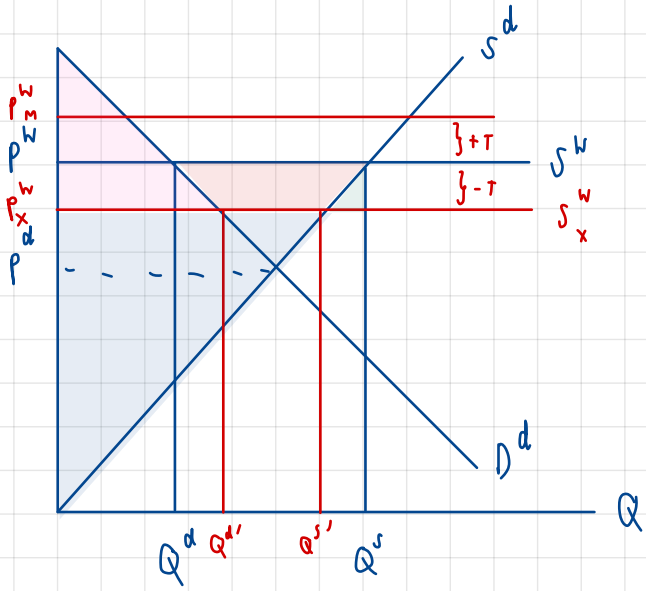
With Quota

When tariff adds into the market, the world supply will shift up because the world producers produce more but when the quota adds into the market, the domestic price will shift down to quota price but still higher than word price that shift domestic supply to S^d + quota. Both of them make producer surplus increase which shown by the blue area and make consumer surplus decrease which shown by orange area and also make the deadweigh loss which shown by green area too. And, the similar thing is the revenue in the red area that tariff earned by governmend and quota earned by license holders. So, it means that the groups of people who are better off are the producers, government and licence holder, on the other hand the group of people who is worse off is consumer who bears higher cost.

3. Consider an exporting country. Analyze welfare effect on all stakeholders when its government impose "Export Tax", i.e., per-unit tax imposed on the exported good. Draw a diagram(s) and provid complete analysis on who gain(s) and who lose(s).



with free trade



with export tax

when the government imposes the tax on export, it will make the world price of import increase and makes the foreign demand decrease according to the higher price. So, it makes the export decrease and make a lot of goods in domestic that the producers will be lower the price. And the government will gain the benefit from tax revenue and the consumers will gain the benefit from consuming in cheap price P^W_X. While, the producers will suffer from losing benefit.

4. A "small", open economy is engaging in international trade. Its domestic demand curve is given by P = 100 – Q and its domestic supply curve is given by P = Q. The world price of the good is 20$. Answer the following questions.

   a. What does it mean for a country to be "small"? What implication of being "small" has on th world supply curve?

   b. Is this economy either an exporting or important country? Why? How many units of the goods is the country is currently importing or exporting?

   c. Now suppose the government decides to intervene. If the country is importing, the government will impose import tariff of 10$ per unit. If the country is exporting, the government will impose export subsidy of 10$ per unit. Calculate

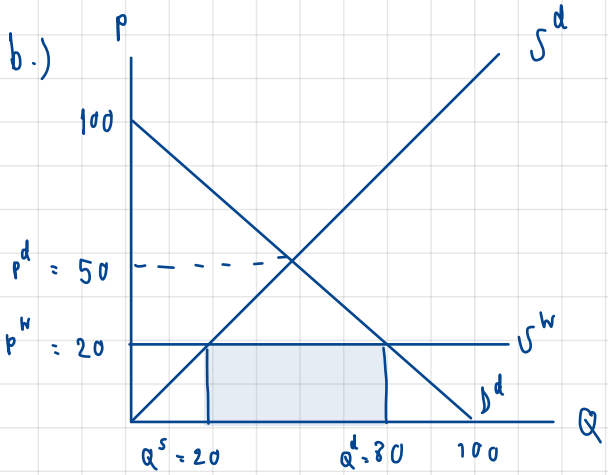
      i. Domestic consumer and producer surplus after the intervention

      ii. Either subsidy cost or tariff revenue

      iii. Deadweight loss from the intervention.

a.) A country to be small or small open economy means a country that participates in the international trade and have no effect on world economy. And it describe by the amount of working population which is less than the global median and show the gap between the large-small open economy.

b.)



P^d : $P = 100 - P$; $P = Q$

$2P = 100$

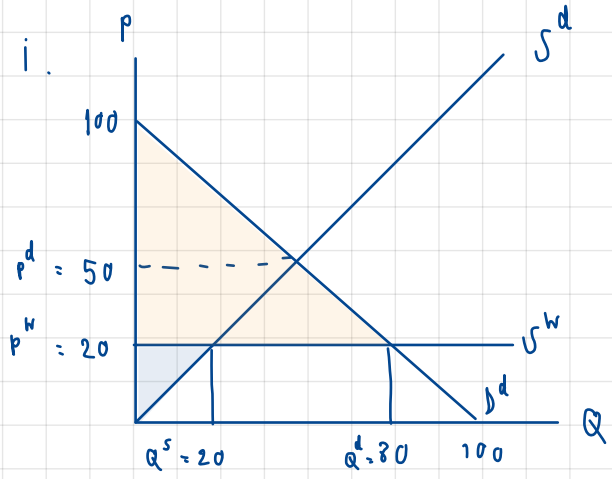
$P = 50$

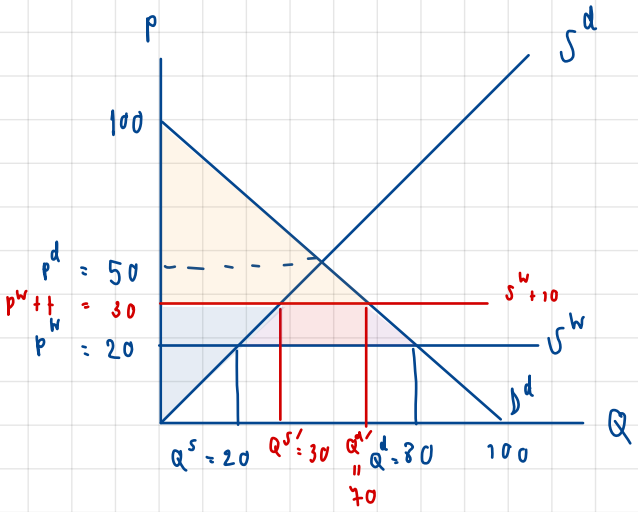
$Q^s = 20$; $P = Q$

$Q^d = 100 - 20 = 80$; $P = 100 - Q$

The currently importing of the country is equal to 60 units (80 - 20) This country is consider to be importing economy because the price domestic or P^d is higher than world price or P^w that the consumers prefer to consume the importing goods.

c.) i.





with tariff

$Q^{S'} = 30$ where $P = Q$

$Q^{d'} = 100 - 30 = 70$

Domestic consumer surplus after tariff

$= \frac{1}{2} \times 35 \times (100 - 30) = 35 \times 70 = 2450$ ฿

in the orange area.

Domestic producer surplus after tariff

$= \frac{1}{2} \times 15 \times 80 = 450$ ฿

in the blue area.

ii) Tariff revenue (in red area) is equal to $(30 - 20)(70 - 30) = 10 \times 40$

$= 400$ ฿

iii) Deadweight loss (in purple area) is equal to

$$\left(\frac{1}{2}\right)(30-20)(30-20) + \left(\frac{1}{2}\right)(80-70)(30-20) = \left(\frac{1}{2}\right)(10)(10) + \frac{1}{2}(10)(10)$$

$$= 50 + 50$$

$$= 100$$ ฿