

### 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
1 <sup>st</sup>		80		20	
2 <sup>nd</sup>		60		20	
3 <sup>rd</sup>		40		20	
4 <sup>th</sup>		20		20	
5 <sup>th</sup>		0		20	

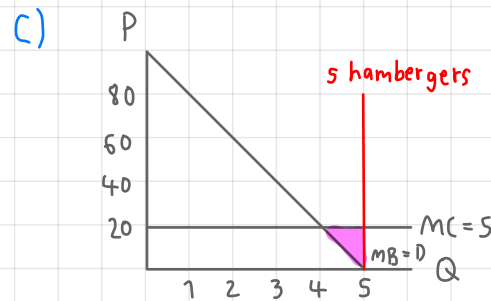
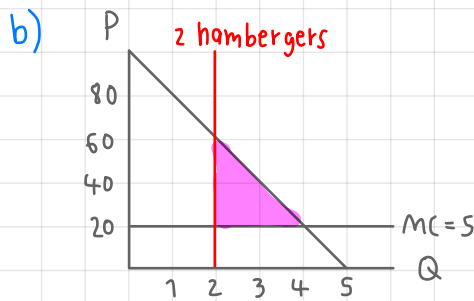
2. With diagrams, explain the differences between tariff and quota. Also, explain the impact on domestic stakeholders (consumers, producers, and government), i.e., who is better off and who is worse off? Why?
3. Consider an exporting country. Analyze welfare effect on all stakeholders when its government 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.

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.

- How many units of hamburgers should you order? Why?
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- 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
1 <sup>st</sup>	80	80	20	20	60
2 <sup>nd</sup>	140	60	40	20	100
3 <sup>rd</sup>	180	40	60	20	120
4 <sup>th</sup>	200	20	80	20	120
5 <sup>th</sup>	205	0	100	20	100

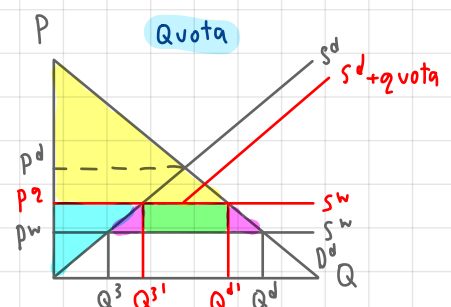
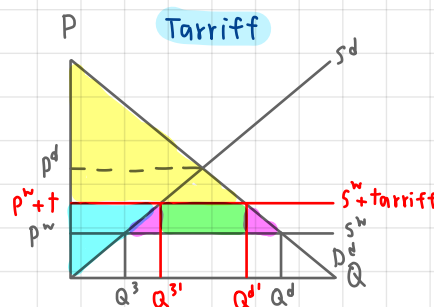
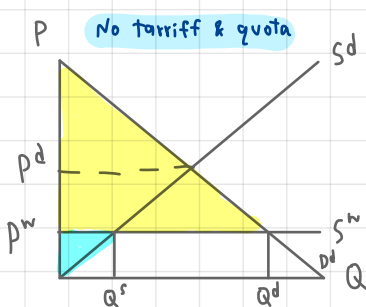
a) 4 units because marginal benefit must greater or equal to marginal cost. ANS



It is under-allocation because we can order 4 units.  $DWL$  is  $\frac{1}{2} \cdot 2 \cdot (60 - 20) = 40$  ANS

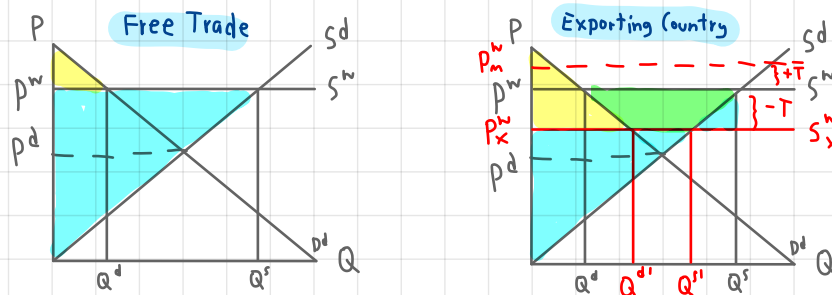
It is over-allocation b/c we can order on 4 units.  $DWL$  is  $\frac{1}{2} (1)(20) = 10$  ANS

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?



When tariff added to mkt, it will shift world supply up b/c world producers produce more. However, quota added to mkt, domestic will shift price dom to quota ( $p^q$ ) but still higher than world price which shift domestic supply ( $S^d$ ) to  $S^d + \text{quota}$ . There are increasing in producer surplus, decreasing in consumer surplus and cause  $DWL$ . According to revenue, tariff earned by gov. and quota earned by license holders. So, the groups of people who are better off are producer, gov. and licence holder. While the group of people who is worse off is consumer who bears higher cost. ANS

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).



When gov. imposes tax on exporting goods, it will increase world price import. Then, foreign demand will decrease by shift left according to the higher price. It declines in export. So, there are a lot of goods in domestic that producers will be lower price. It means that gov. will gain the benefit from tax revenue (export tax "T") and consumers will gain the benefit from consuming in cheap price " $P_x$ ". Producers will suffer from losing benefit.

ANS

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\$.

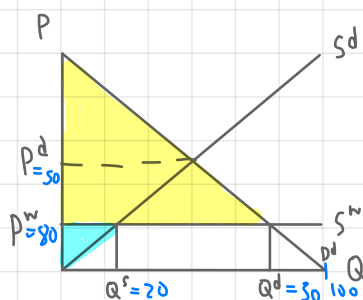
Answer the following questions.

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

A small open economy is a country which participates international trade which not effect world economy (Price and income). It is defined by the working population which is less than global med and show gap b/w large to small.

ANS

- 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?



$$P^d : P = 100 - Q ; P = Q , Q^s = 20 , P = 20$$

$$P = 20$$

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

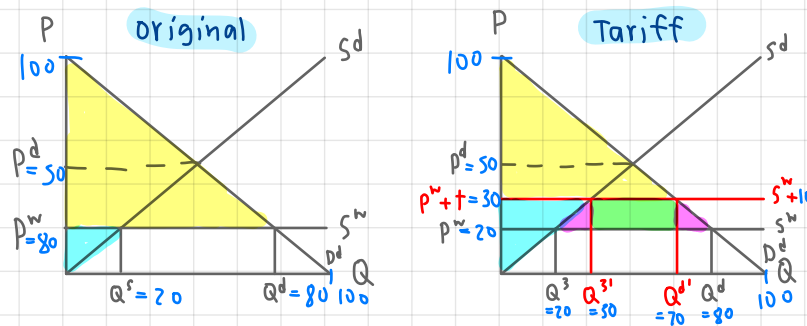
∴ This country is importing country b/c  $P^d$  is higher than  $P^w$ . consumers prefer to consume the importing goods (low price) and import for  $80 - 20 = 60$  units

ANS

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.

i)



ii) Tariff revenue =  $(30 - 20)(70 - 30) = 10(40) = 400$  ANS

iii)  $DWL = \frac{1}{2}(30 - 20)(30 - 20) + \frac{1}{2}(80 - 70)(30 - 20)$   
 $= 100$  ANS