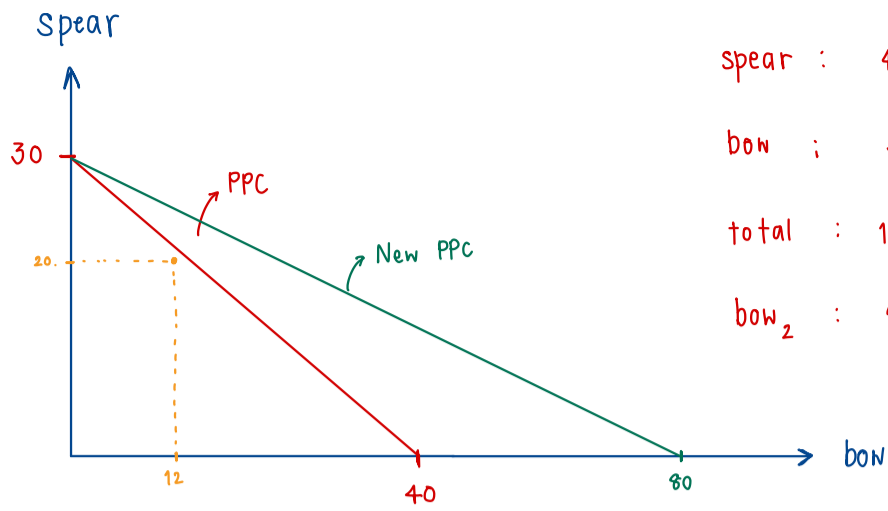


1.) 1.a)



spear : 4 units of wood
 bow : 3 units of wood
 total : 120 units
 bow₂ : 1.5

1.b) opportunity cost for a spear : 1.33

$$\begin{aligned} 30 \text{ spears} &= 40 \text{ bows} \\ 1 \text{ spear} &= x \text{ bows} \end{aligned}$$

$$x = \frac{40 \times 1}{30} = \frac{4}{3} \approx 1.33$$

Ans: When the number of spear increases or decrease, the number of bow will change by 1.33 as an opportunity cost.

1.c) Producing 20 spears cost 20×1.33 bows = 26.6, which is 79.8 units of wood.

Finding the remaining unit of wood,

$$120 - 79.8 = 40.2 \text{ units of wood to produce a bow}$$

Calculate the feasible bows,

$$40.2 \div 3 = 13.4$$

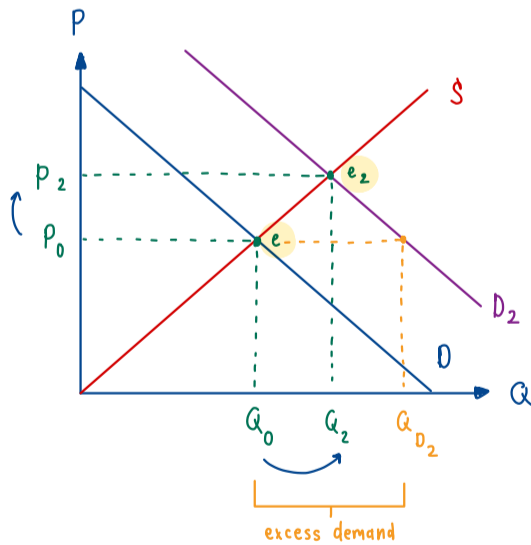
Yes, it possible and efficient as both production located under the PPC, and

Ans: Yes, it is possible but not efficient as both production located under the PPC (not on the PPC), their are only small remaining resource left after the production. This means the production is inefficient.

1.d.) 30 spears : 80 bows
 1 spear : 2.67 bows //

Ans: It increases the opportunity cost for a spear, and creates a new PPC which is widen along with the x-axis as show in the figure.

2.) 2 a)

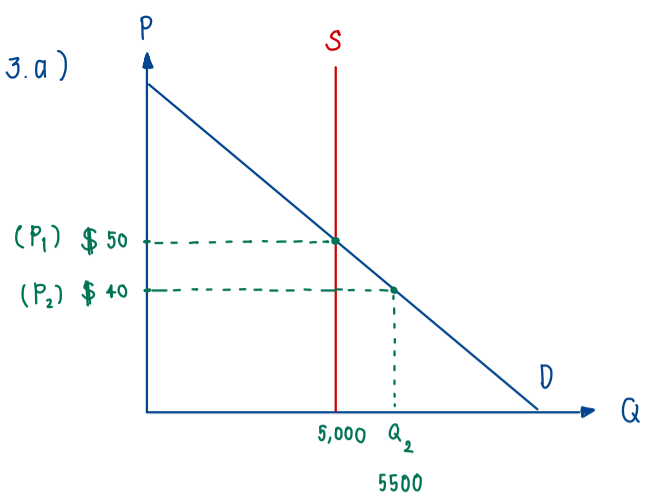


Ans: The demand would change because the quantity demanded increased due to the fact that product of this market is necessary and unsubstitutable, causing shifting in market demand.

2 b.) Ans: Excess demand, the pandemic increases both equilibrium price and quantity of the market.

2.c.) Ans: The consumer surplus and producer surplus are extended during the pandemic, where the demand surge occur. Due to the increasing quantity demand and willingness to pay of buyers.

3.) 3.a)

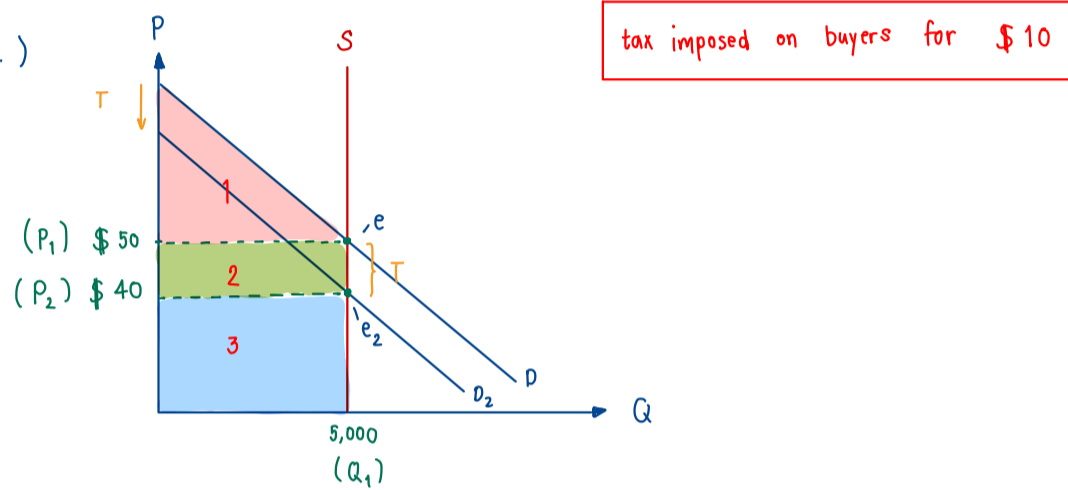


3.b) Ans: At the equilibrium the elasticity of demand and supply will be :

$$\epsilon_d : \frac{P}{Q} \cdot \frac{\Delta Q}{\Delta P} = \frac{50}{5000} \times \frac{500}{40 - 50} = -0.5 //$$

$$\epsilon_s : \frac{P}{Q} \cdot \frac{\Delta Q}{\Delta P} = \frac{50}{5000} \times \frac{5000 - 5000}{40 - 50} = 0 // \rightarrow \text{Perfectly inelastic}$$

3.c.)



Ans : Region 2 burden belongs to the producers, there is no deadweight loss in this case.