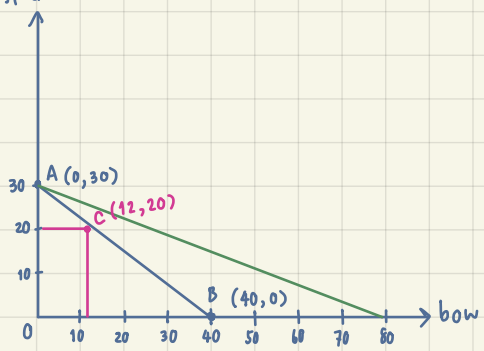
6404640200 Nine

Assignment 1

1. a) spear



A human civilization find total 120 units of wood. To produce a spear for hunting, it takes 4 units of wood. If we use all wood to produce spear, the maximum amount of spear we will get is 30 units.

While making bow use 3 units of wood, if use all wood to produce bow, the maximum amount of bow that can get is 40 units.

Point AB is called human civilization's PPC.

b) Opportunity cost for a spear, in terms of bow.

Produce 30 spears cost 40 bows

Produce 1 spears cost $\frac{40}{30}$ bows or 1.33

∴ the opportunity cost of 1 spear is 1.33 bow.

c) It takes 4 units of wood to produce 1 spear. So to produce 20 spears take 80 units of wood.
It takes 3 units of wood to produce 1 bow. In order to produce 12 bows, it takes 36 units of wood.
If combine the total unit of wood being used the total will equal to 116 units.
∴ It is efficient because point C is under PPC line

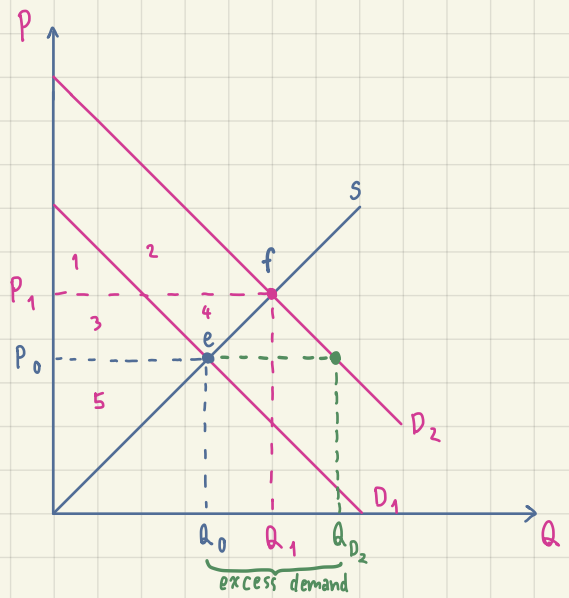
d) If a new method of making bow required only 1.5 units, the maximum amount of bow that can be produce will increase from 40 units to 80 units (green line).

Produce 30 spears cost 80 bows

Produce 1 spears cost $\frac{80}{30}$ bows or 2.67

∴ The opportunity cost of 1 spear is 2.67 bows.

2. a)



Equilibrium price : (Q_0, P_0)

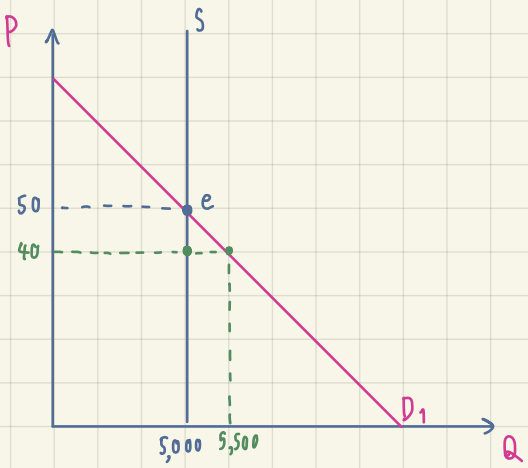
Since there is a pandemic, people are assigned to work from home and computer devices are crucial. So people demand more for computer. Causing the demand line shift to the right, that is mean the quantity demanded has increased. Therefore, the equilibrium price change from (Q_0, P_0) to (Q_1, P_1).

b) After the demand line shift to the right, the equilibrium price change from point e to point e_1. It makes quantity demanded and supplied increase. So at the original equilibrium there will be excess demand because people willing to buy more computer at any price.

c)

	Before	After	Diff.
CS	1 3	1 2	2 - 3
PS	5	3 4 5	3 4
Total	1 3 5	1 2 3 4 5	2 4

3. a)



b) $\varepsilon_d = \frac{\%\Delta Q_d}{\%\Delta P}$

$\%\Delta Q_d = \frac{5,500 - 5,000}{5,000} \times 100$

$= \frac{500}{5,000} = 10\%$

$\%\Delta P = \frac{40 - 50}{50} \times 100$

$= -\frac{10}{50} \times 100 = -20\%$

$\varepsilon_d = \frac{10\%}{-20\%} = -0.5\%$

∴ Price elasticity of demand is 0.5

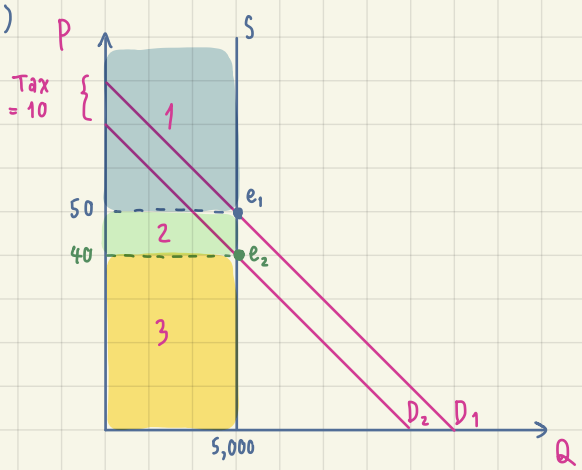
$\varepsilon_s = \frac{\%\Delta Q_s}{\%\Delta P}$

$\%\Delta Q = \frac{5,000 - 5000}{5,000} \times 100$

$= 0$

∴ Price elasticity of supply is 0

c)



	Before	After	Diff.	Tax burden
CS	1	1	-	-
PS	2 3	3	-2	2
Gov.	-	2	2	-
TOTAL	1 2 3	1 2 3	-	2

∴ There is no DWL in this case and all burden belongs to the sellers.

The demand shift downward because the consumer have lower willingness to pay because they have to pay the unit tax to the government.