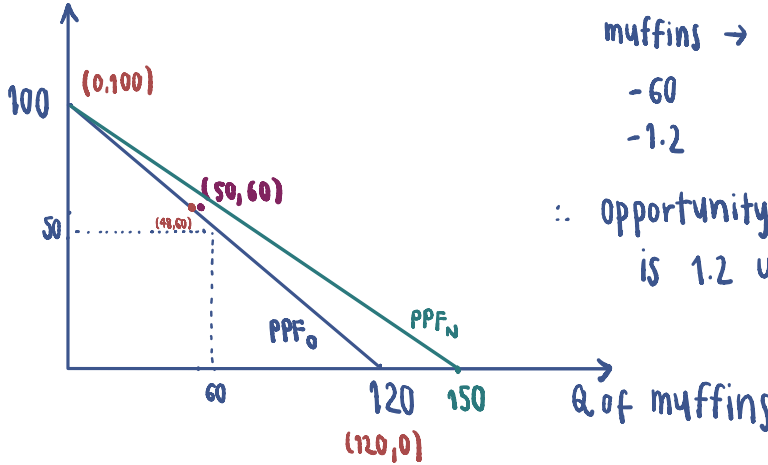


1a

Q. of cupcakes



opportunity cost for cupcakes

muffins  $\rightarrow$  cupcakes

-60      +50

-1.2      +1

$\therefore$  opportunity cost for each cupcakes is 1.2 unit of muffins

$$y - y_0 = m(x - x_0)$$

$$y = \frac{\Delta y}{\Delta x} (x - 120)$$

$$y = \frac{-100}{120} (x - 120)$$

$$60 = \frac{-100}{120} (x - 120)$$

$$x = 48$$

1b She can't bake 60 cupcakes with 50 muffins because the resource is not sufficient and at (50,60), it is out of the production possibility frontier.

1x

opportunity cost for cupcakes in new PPF

muffins  $\rightarrow$  cupcakes

-75      +50

-1.5      +1

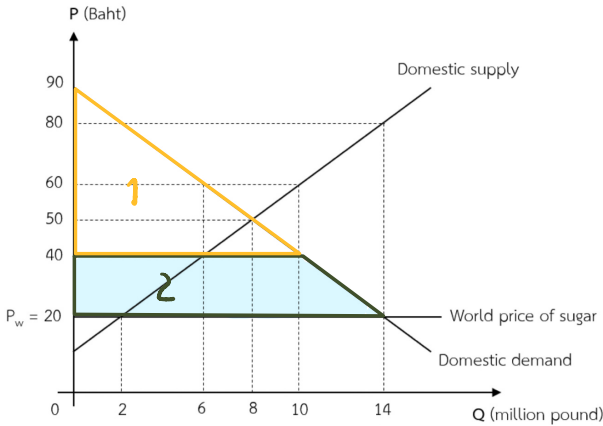
$\therefore$  opportunity cost for each cupcakes is increase from 1.2 unit to 1.5 unit of muffins.

$\therefore$  increase by 0.3 unit of muffins.

2a at world price, sugar price = 20 Baht  
 from graph domestic supply = 2 million pounds  
 but domestic demand = 14 million pounds  
 ∴ have to import sugar 12 million pounds

2c 6 million pounds

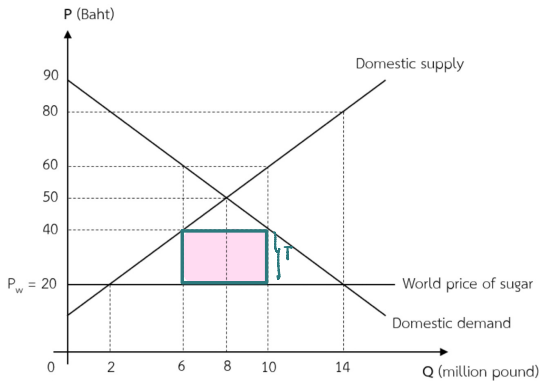
2d



surplus	before	after	different
CS	1+2	1	-2

The consumer will be worst off, the different between the willingness to pay and the price market decrease, the quantity demand decrease so the consumer surplus is less.

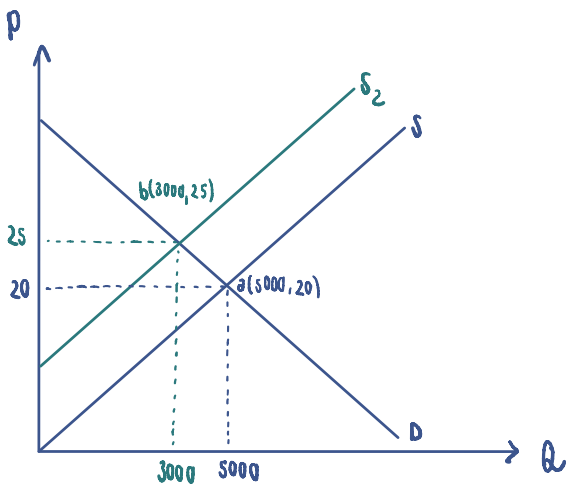
2e



$$\text{Total revenue : } TR = \Delta P \cdot \Delta Q \\ = (20)(4) = 80$$

The price of sugar after tax is 40 \$/pound. From the graph, the domestic quantity supply is 6 million pounds; however, the domestic quantity demand is 10 million pounds.

So government has to import sugar 4 million pounds, with 20 baht import tax per pound. The government total revenue would be 80 million baht.



$$\begin{aligned}
 \boxed{3a} \quad \epsilon_{d(b)} &= \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q} \\
 &= -400 \cdot \frac{25}{3000} \\
 &= -3.33
 \end{aligned}$$

$\boxed{3b}$  decrease  
 $\therefore$  green tea is an elastic demand  
 so when the price goes up,  
 the total revenue will go down.

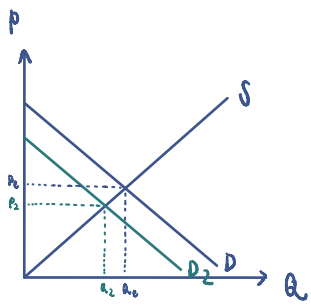
$$\boxed{3c} \quad \epsilon_c = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in another commodity price}} = \frac{\% \Delta Q_d^a}{\% \Delta P^b}$$

$\boxed{3d}$  substitute.

$\therefore$  When sweetened green tea price increases,  
 people would buy super drink instead  
 as it is cheaper.

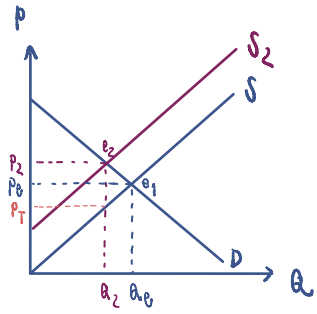
$$\begin{aligned}
 &= \frac{P^b}{Q^a} \cdot \frac{Q_2^a - Q_1^a}{P_2^b - P_1^b} \\
 &= \frac{20}{2500} \cdot \frac{3000 - 2500}{25 - 20} \\
 &= 0.8
 \end{aligned}$$

4a



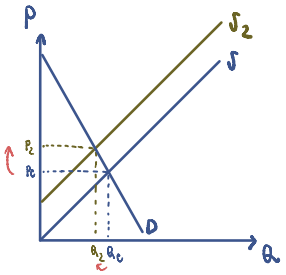
This campaign will effect how consumer want to buy liquor less means that the demand will decrease. The demand curve shift left (down) and make a new equilibrium with lower price and lower quantity.

4b

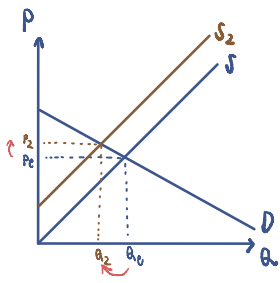


If the government collect the unit tax on seller, the seller will increase the price that would shift the supply curve upward. The new equilibrium, the price rise up but the quantity fall down.

4c



For alcoholic, the liquor is necessary so the demand curve will be inelastic. Though the price increase, the quantity demand would not effect that much and will decrease by little.



For occasional drinker, the liquor is not necessary so the demand curve will be elastic. When the price goes up by little, the quantity demand will decrease a lot.