CollegeBoard
Advanced Placement Program

AP® Micro Economics
2004 Sample Student Responses
Form B

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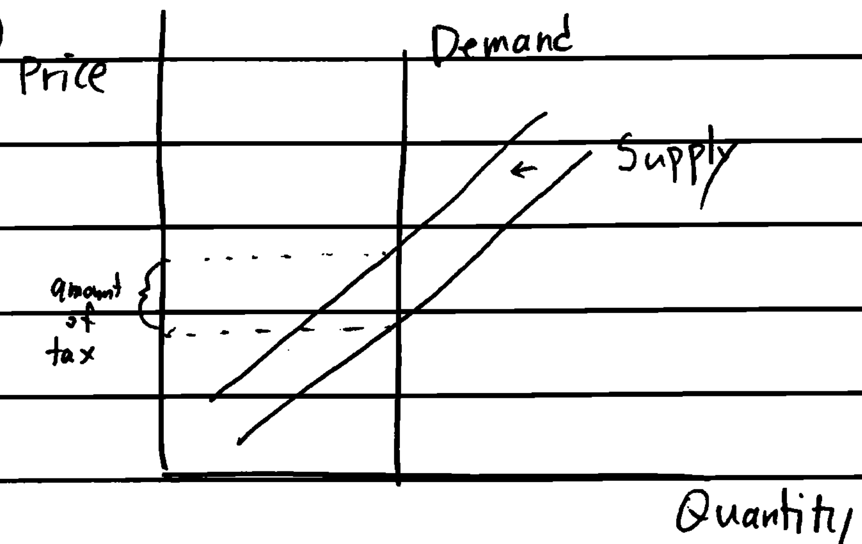
2A

Write in the box the number of the question you are answering on this page as it is designated in the examination.

2

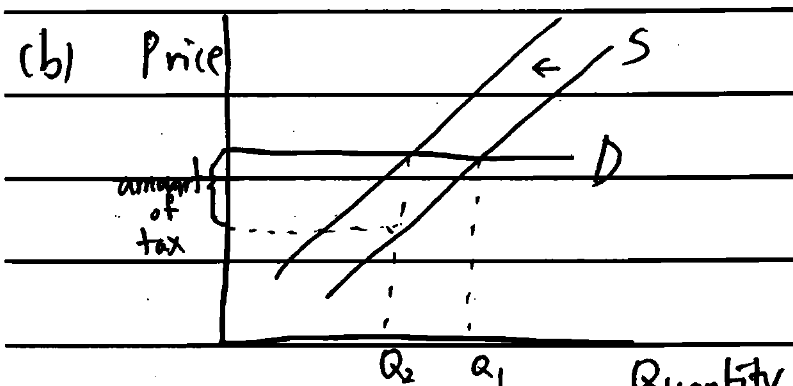
(a)



(i) the tax makes the supply curve shift to the left. But since the demand is perfectly inelastic, the quantity sold does not change.

(ii) As seen in the graph, the burden falls entirely on consumers.

(b)



(i) As the supply curve shifts to the left, the quantity sold decreases from Q_1 to Q_2 in the graph

(ii) As seen in the graph, the burden of tax falls entirely on suppliers of the good.

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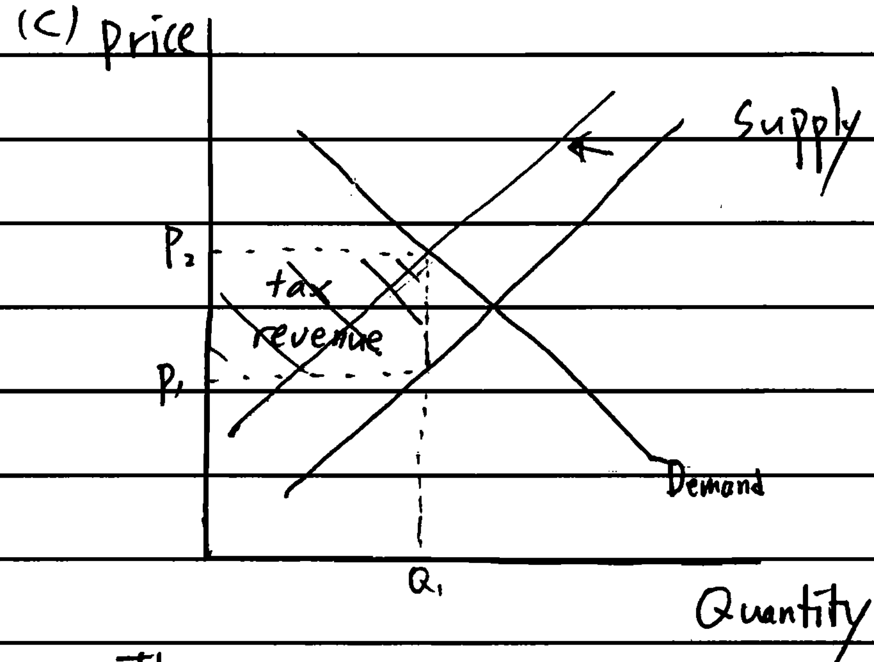
2

Write in the box the number of the question you are answering on this page as it is designated in the examination.

(c)



The ~~Q~~ tax revenue is shown in the graph above

Goods are sold at P_2 and ~~Q. suppliers~~ tax payed is $(P_2 - P_1)$ for each unit sold. The quantity sold is Q_1. So the total tax revenue is $(P_2 - P_1) \times Q_1$

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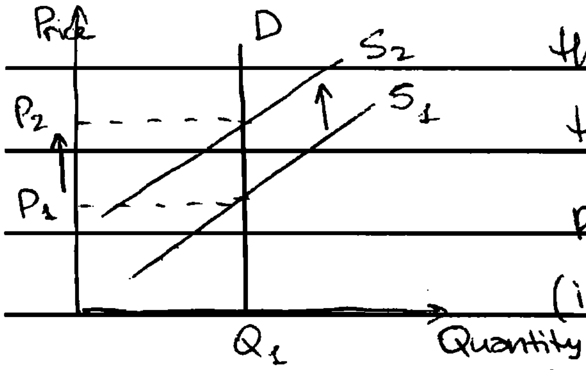
2B

Question 2

Write in the box the number of the question you are answering on this page as it is designated in the examination.

(a) If consumers buy the same quantity no matter

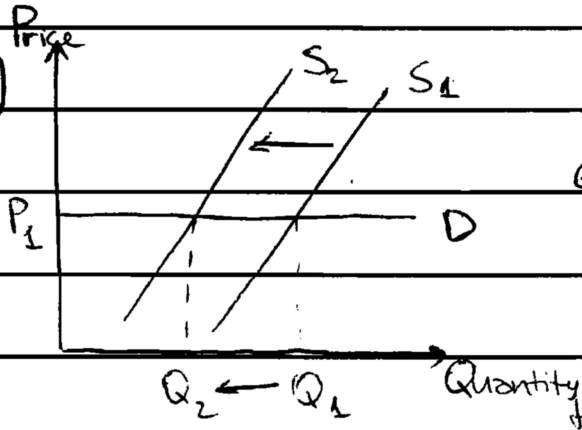


the price is, it means that the demand ~~for~~ good X is perfectly inelastic.

(i) When tax is imposed, the production of good X becomes more expensive and supply decreases and shifts upwards to the left. Since demand is perfectly inelastic the only change will be in prices, but tax doesn't affect the quantity sold and it remains at its level Q_1

(ii) Consumers now will be paying a higher price for good X, but producer will be still producing the same quantity of good X at the same price and thus the burden of tax will be fully paid by consumers (buyers)

(b)



If the demand is perfectly elastic any shift in supply will affect only the the quantity sold of the product. After the decrease of supply the price level remains at the same level of P_1.

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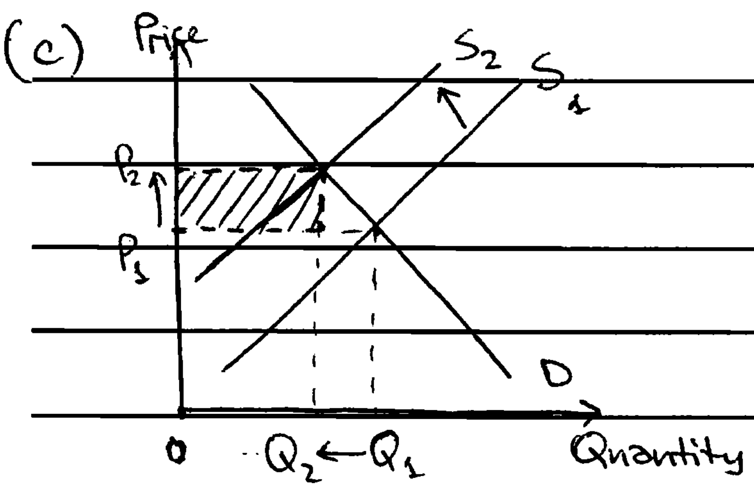
Question 2.

(ii) After the reduction of supply and because of perfect elasticity of demand the sellers are ~~to~~ enforced to decrease their output from Q_1 to Q_2 while buyers consume the good at the same price level. So, the tax burden will be fully paid by producers (sellers)

(c) 

After the imposition of tax new price level will be P_2 which is higher than the initial P_1 and the new quantity results in the reduction from Q_1 to Q_2. Now people will consume only amount of Q_2 at the price of P_2. The difference between P_2 and P_1 is the value of tax. Total tax revenue is the product of the tax value and the quantity of good consumed: $T_xR = T_x \cdot Q = Q_2 \cdot (P_2 - P_1)$

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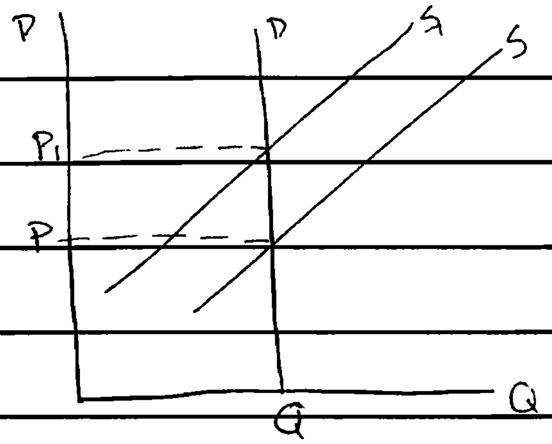
2C

Write in the box the number of the question you are answering on this page as it is designated in the examination.

2

a)

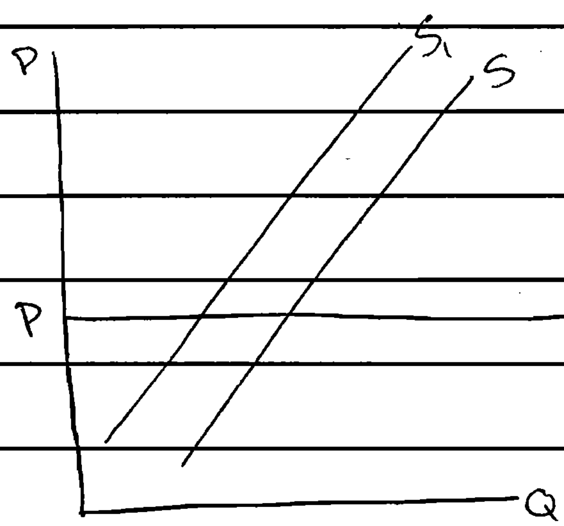


Industry X

(i) There will be no change in quantity sold when the tax is imposed because demand is perfectly inelastic; consumers buy the same quantity no matter what the price is.

(ii) since demand is inelastic, consumers will bear more of the burden of the imposed tax.

b)

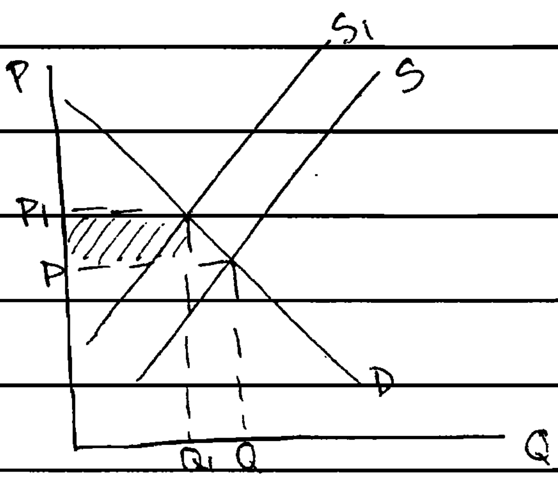


Industry Y

(i) The price of the good that consumers pay when the tax is imposed does not change because demand is perfectly elastic.

(ii) since demand is perfectly elastic, the sellers bear the burden of the imposed tax because they cannot increase price.

c)



Industry Z

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