

Self Assessment Questions

Linear Economic Models

- Demand and supply in a market are described by the equations
$$Q_d = 66 - 3P$$
$$Q_s = -4 + 2P$$
 - Solve algebraically to find equilibrium P and Q
 - How would a per unit sales tax t affect this equilibrium and comment on how the tax is shared between producers and consumers
 - What is the equilibrium P and Q if the per unit tax is $t=5$
 - Illustrate the pre-tax equilibrium and the post-tax equilibrium on a graph
- The demand and supply functions of a good are given by
$$Q_d = 110 - 5P$$
$$Q_s = 6P$$
where P , Q_d and Q_s denote price, quantity demanded and quantity supplied respectively.
 - Find the inverse demand and supply functions
 - Find the equilibrium price and quantity
- Demand and supply in a market are described by the equations
$$Q_d = 120 - 8P$$
$$Q_s = -6 + 4P$$
 - Solve algebraically to find equilibrium P and Q
 - How would a per unit sales tax t affect this equilibrium and comment on how the tax is shared between producers and consumers
 - What is the equilibrium P and Q if the per unit tax is 4.5
- At a price of €15, and an average income of €40, the demand for CDs was 36. When the price increased to €20, with income remaining unchanged at €40, the demand for CDs fell to 21. When income rose to €60, at the original price €15, demand rose to 40.
 - Find the linear function which describes this demand behaviour
 - Given the supply function $Q_s = -7 + 2P$ find the equations which describe fully the comparative statics of the model.
 - What would equilibrium price and quantity be if income was €50?