

3.1 Elasticity, welfare and policy

Name: _____ Class: _____ Date: _____

Total: 6 marks**KEY WORDS** elasticity • tax incidence • external cost • welfare

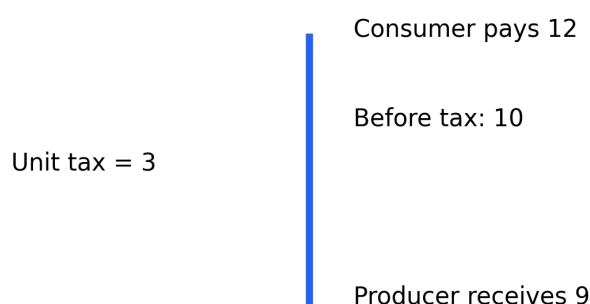
Objective

Apply the supported native methods to original data and justify a qualified transfer conclusion.

1 Key knowledge and worked examples

Percentage changes need a stated convention. PED uses quantity demanded and own price on the same demand relation; PES uses quantity supplied. YED and cross-price elasticity compare different determinants. A unit tax creates a price wedge; relative responsiveness shapes burden. An externality concerns third-party costs/benefits, not merely an expensive transaction. Public goods and information failure have different mechanisms.

Original tax wedge: prices, not a welfare-area diagram



Per-item burden: consumer 2; producer 1. Quantity not supplied.

An original market's pre-tax price is 10. After a unit tax, consumers pay 12 and producers receive 9. Calculate the wedge and burden, then qualify a welfare claim.

Tax per item = consumer price – producer receipt = $12 - 9 = 3$ currency units/item. Consumer burden = $12 - 10 = 2$ units/item; producer burden = $10 - 9 = 1$ unit/item. The stated burden split concerns this equilibrium, not a universal tax rule. Tax revenue = tax per item $\times$ post-tax quantity; that quantity must be known. Revenue is a transfer, while welfare effects require changes in surplus, resource use and any external harm. A corrective tax can reduce inefficient overproduction, but only with

the relevant external-cost model and evidence. Collection cost, evasion and access matter.

2 Practice

2.1 For the worked case, state the method, show its application and give a limitation.^[3]

3 Exam-style questions

3.1 A subsidy expands a product with an unpriced external cost. Is greater output necessarily a welfare gain? Compare a better-targeted policy. ^[3]

Solutions

2.1 Tax per item=consumer price–producer receipt= $12-9=3$ currency units/item. Consumer burden= $12-10=2$ units/item; producer burden= $10-9=1$ unit/item. The stated burden split concerns this equilibrium, not a universal tax rule. Tax revenue=tax per item $\times$ post-tax quantity; that quantity must be known. Revenue is a transfer, while welfare effects require changes in surplus, resource use and any external harm. A corrective tax can reduce inefficient overproduction, but only with the relevant external-cost model and evidence. Collection cost, evasion and access matter. Authored points for method, application and relevant qualification.

3.1 Greater output can increase external harm even if consumers and producers gain privately. Identify marginal social/private costs and the efficient versus market quantity before judging. A targeted charge or standard may address the harm more directly, subject to measurement, enforcement and distribution. A subsidy for a cleaner alternative might help through a different mechanism; its fiscal and behavioural effects still need evaluation. IGCSE pupils use the supported private/external/social distinction; detailed marginal welfare geometry belongs only where the course's mapped outcomes authorize it. Authored points for judgement, case-linked reasoning and justified qualification. Accept supported alternatives.