

Exercise walk-through

2.1

Elasticity, welfare and policy

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The method

Method — Worked example

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.

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

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corrective tax can reduce inefficient overproduction, but only with the relevant external-cost model and evidence. Collection cost, evasion and access matter.

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Exercise 3.1

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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.