

Problem 1

The marginal costs of a firm producing good X are given by the formula $MPC = 0.6X$. The government estimated that the marginal social costs of producing X are $MSC = 0.8X$. The firm is a price-taker, and the market price of good X is $P_X = 48$. How much should the tax per unit amount to if a government wants to correct the market inefficiency?

Problem 2

Private and social marginal cost functions are given, respectively, by the following formulas: $MPC(q) = 4q$, $MSC(q) = 4 + 5q$, while the private and social marginal benefit function is $MPB(q) = MSB(q) = 28 - q$, where q denotes the quantity. What is the Pigouvian tax rate eliminating the market inefficiency?

Problem 3

An intervention aimed at correcting an inefficient market allocation that results from a negative externality (external cost) may involve introducing a tax so that:

- a) the marginal external cost is equal to zero.
- b) the injured receive compensation equal to the total external costs.
- c) marginal social benefits are equal to marginal social costs.
- d) marginal external benefits are equal to marginal external costs.

Problem 4

The Coase Theorem suggests a way to correct erroneous market allocations resulting from externalities. The practical application of this approach is often hindered by:

- a) the difficulty that the government encounters when estimating the size of the externality.
- b) the unfair burdening of the entity generating the externality with the obligation to pay a fee to the injured party
- c) the lack of insurance covering the risk involved in the transaction between the injurer and the injured party.
- d) the existence of high transaction costs.

Problem 5

The production of good X generates negative externalities. Assuming that the market for good X is purely competitive, in the equilibrium:

- a) both the output level and the price level will be higher than socially optimal.
- a) the output level will be lower, while the price level will be higher than socially optimal.
- b) the output level will be higher, while the price level will be lower than socially optimal.
- c) both the output level and the price level will be lower than socially optimal.