

**GOVERNMENT INTERVENTION**

Problem #1

Color pencils are one of the most important goods in a certain university town. The table below presents the quantity of pencils demanded by students and offered by suppliers in this town.

Price (per unit in <i>złoty</i> )	Demand (in units)	Supply (in units)
1.2	0	30
1.0	10	25
0.8	20	20
0.6	30	15
0.4	40	10
0.2	50	5

(...)

- c) What will the situation in the discussed market look like when university authorities introduce a law prohibiting prices exceeding 0.4 *złoty* per pencil?
- d) What will the situation in the discussed market look like when university authorities introduce a law prohibiting prices lower than 1 *złoty* per pencil?

(...)

Problem #7

The inverse demand function for the “Workouts in Intermediate Macroeconomics” takes the form of  $P(q) = 630 - 5q$ , while the inverse supply function is  $P(q) = 70 + 3q$ , where  $q$  stands for quantity of “Workouts...”.

(...)

- d) Assume that in situation from point c) the Dean of the Faculty of Economics prohibited selling “Workouts...” for a price exceeding the “ordinary” equilibrium price. Find the demand surplus.

Problem #12

The demand function for German leather bags is given by the formula  $Q(p) = 200 - p$ , while the supply function is  $Q(p) = 50 + 0.5p$ , where  $p$  stands for the price per unit in Euro. Assume that the government introduces a tax on leather bags amounting to 6 Euro for every bag sold.

- a) Find the market price and quantity of bags sold following the introduction of the tax.
- b) What parts of the tax will be paid (borne) by the consumer and the producer?
- c) Find the tax revenues.

Problem #13

Find the market equilibrium before and after the introduction of the tax, the division of the tax burden between consumers and producers, tax revenues, and the deadweight loss resulting from the introduction of the tax for the following cases:

(...)

- b) The demand function for mineral water in Egypt takes the form  $Q(p) = 30 - 9p$ , where  $p$  is the price per  $m^3$  in Egyptian pounds. The supply of water is perfectly inelastic. The government imposes a tax amounting to 0.25 Egyptian pound for every  $m^3$  of mineral water sold.

(...)

Problem #14

The market for special tennis shoes is characterized by a horizontal supply curve and a linear, negative monotonic (decreasing) demand curve. Currently the government imposes a tax amounting to  $t$  for every pair of shoes sold. Assume that the government decides to double the tax for every pair. In such event, is

it true that doubling the tax causes the deadweight loss resulting from introduction of the tax to increase twice?

Problem #15

The demand function for flour in a poor African village takes the form  $Q(p) = 160 - 2p$ , while the supply function is  $Q(p) = 40 + p$ , where  $p$  stands for price per kg in shells. In order to counteract poverty in the village the ruler thereof issued a regulation prohibiting the sale of flour for a price exceeding 30 shells per kg. In order to eliminate the shortage of flour he also decided to grant the sellers of flour a subsidy equalizing demand for flour with its supply. Find the appropriate subsidy level (per kg of flour sold).

Problem #16

The demand function for mackerels in the EU Member States is given by the formula  $Q(p) = 900 - 2.25p$ , while the supply function is  $Q(p) = 180 + 1.35p$ , where  $Q$  is the quantity in thousand tons and  $p$  is the price in Euro per ton. In order to protect the fisheries the “government of the Community” plans to fix the price of mackerels at the level of 220 Euro per ton. Therefore, the government purchases mackerels at the artificially fixed price level and destroys them. How many tons of mackerels does the government have to destroy? Find the costs of such policy.