

Seminar 8.

Task 1. The demand for ripe watermelons is given by the formula $8/p$. The demand for green watermelons at any price is four times less than for ripe ones. The share of ripe watermelons in the market is 75%. Find the formula for market demand for watermelons.

Task 2. New and used washing machines are sold on the market. The offer of low-quality used washing machines is set by the formula $2p - 2800$, where p - the price of the goods. Sellers of low-quality used washing machines spend on the repair of one machine for 245 USD more than their competitors. Find:

- a) the supply function of new washing machines;
- б) the share of new machines on the market at prices of 2400 USD.

Task 3. Demand for quality goods is equal $40 - p$, and demand for low-quality goods is equal $11 - p$. The supply of quality goods is given by the formula $p - 10$, and the supply of substandard goods is given by the formula $p - 5$. On the first day, buyers assume that all goods are of high quality. Find:

- a) the price and share of quality goods in equilibrium;
- б) equilibrium parameters during the first three days.

Task 4. Two types of mobile phones are imported to Macroland: "white" and "grey". The demand function for "white" phones (in thousands) $D_1 = 1524 - 10p$, for "grey" - $D_0 = 850 - 27p$, the supply functions of mobile phones have the form $S_1 = 6p - 200$ and $S_0 = 2p - 10$ accordingly. Considering that the equilibrium in the market is established according to the "web model", determine the maximum amount of taxes the state can receive if the sale of each "white" phone by sellers pays the fixed tax. What will be the amount of tax? At what step should this tax be introduced? What will be the equilibrium price?