

Microeconomics — class 13

1. A popular author wants to publish and sell his book himself. He assesses that the demand for his book will be $d(p) = 2000 - 100p$. The cost of starting the publishing procedure is 1000 and the marginal cost of publishing is 4.

How many books the author is going to issue? What will be the price and his profit?

2. In a monopolized industry the aggregate demand is $d(p) = (12 - p)^+$, while cost function $c(q) = 1 + q^2$.

- What is the price and production maximizing monopolist profit?
- How it change after imposing a lump sum tax on profit 10zł?
- And after tax 2zł/item?

3. A monopolist has a cost function with both marginal and average cost 5zł. There are two distant markets A and B, with demand functions $d_A(p) = 55 - p$ and $d_B(p) = 70 - 2p$.

a) If we assume that those markets are separate and discrimination is possible, what will be both prices and amounts.

b) How the answer changes if transport from one market to the other costs 5zł?

c) And if it is free?

4. A cost function of a monopolist – the only plastic surgeon in Pskov – is

$c(y) = 90 + 7 \cdot y$, while the inverse demand function $p(y) = \begin{cases} \frac{y^2}{100} - 2 \cdot y + 100 & \text{for } y \leq 100 \\ 0 & \text{otherwise} \end{cases}$.

a) Calculate price, amount and profit.

b) A sociologist employed by him found out that in a wide price range elasticity of demand of blue-eyed is twice as much as for brown-eyed. Look for possibility of discrimination.