

Practice: Microeconomics II / 2

Demand and supply, equilibrium.
 ICC , Engel curve, income and substitution effect,
 elasticity. („E“ or „e“) ☺

Theory:

Shift of supply and demand.

Price ceiling.

Income and substitution effect.

Income consumption curve.

Engel curve.

Price consumption curve.

Types of elasticity and formulas for calculations – arc elasticity and point elasticity.

} draw

Samples:

1. Determine the equilibrium price and quantity, knowing the functions of demand $P = 140 - 3q$ and supply $P = 160 + 7q$.
2. Determine the equilibrium price and quantity, knowing the functions of demand $Q_d = 18 - 2p$ and supply $Q_s = p^2 - 3p + 6$.
3. Draw:
 - Subvention for the sellers. The original equilibrium : $q = 1000\text{ks}$; $p = 20\ 000\text{Kč}$. The new equilibrium :
 - Subvention for the buyers. The original equilibrium : $q = 1000\text{ks}$; $p = 20\ 000\text{Kč}$. The new equilibrium :
 - The effect of a consumption tax on sellers. The original equilibrium : $q = 1100$; $p = 20\ 000\text{Kč}$. The new equilibrium:
 - The price floor on the market, set by the state
 - The price ceiling, set by the state

4. Mr. White is willing to buy for the price of 10 Kč for 1kg of melon only 5 melons a week. But for the price of 8 Kč/kg he buys 7 melons. Determine the price elasticity of demand (E_{PD}).
5. If the monetary income is 1600 Kč, the demanded amount of washing powder is 40 pieces. If the monetary income increases by 290 Kč, the demanded amount increases by 10 pieces. Determine E_I .
6. If the price of one kilo pork increases from 65 Kč to 70 Kč, the demanded amount of chicken increases from 90kg to 100 kg. Determine E_{DK} .

7. The consumer spends his whole monetary income on buying three types of goods. He buys 550 units of goods X for 10 Kč, 425 units of goods Y for 20 Kč a 200 units of goods Z for 30 Kč. The price of goods X increases by 10%, but neither the prices of goods Y and Z nor monetary income change. Now the consumer buys 440 units of goods Y and 190 units of goods Z. What's the price elasticity of demand of goods X?
8. There's a given utility function: $U = 50X - 0,5X^2 + 100Y - Y^2$. $P_x = 4\text{Kč}$, $I = 672\text{Kč}$.
- Deduce the demand function
 - What amount of goods X does the consumer buy, if $P_y = 14\text{Kč}$
 - Determine e_{DI} , if the amount of goods X = result from b.)
9. The consumer only buys goods X and Y. His monetary income is 200Kč and demanded amount of goods Y is 8 pieces. Increasing the monetary income by 50 Kč leads to increasing of the demanded amount to 10 pieces. The price elasticity of demand is -0,2. Determine, using the cross elasticity of demand, whether the goods X and Y are complements or substitutes.
10. Following equities are given: $P_x= 10$, $P_y=80$ a $I = 5000$ Kč. Let's assume the function of demand: $X = 80 - 0,8P_x^2 - 0,5P_y + 0,04I$.
- Determine the price elasticity of demand of goods X. What information gave the calculation to you, assuming you're the producer of goods X?
 - Determine the cross elasticity of demand of goods X, considering the price of goods Y. What information gave the calculation to you?
 - Determine the income elasticity of demand of goods X. What information gave the calculation to you?

Literature:

- L. Macáková: Mikroekonomie II cvičebnice
 R. Holman, Mikroekonomie
 J. Soukupova, Mikroekonomie
 P. Sireček, Mikroekonomická teorie I
 J. Soukupová a spol, Mikroekonomie pro inženýrské studium
 H. Varian, Mikroekonomie

Next practice:

Production and Cost Analysis