Microconomics I, 2023/2024
Master of Science in Economics
Problem Set 3

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Only the solutions to the Questions 1-4 will be graded, the remaining questions are given to practice new topics.

Question 1 Consider a consumer's preferences represented by the following utility function:

$$u(x_1, x_2) = min\{x_1, x_2\}$$

- Compute the consumer's Walrasian demands for goods 1 and 2.

- Compute the indirect utility function.

- Check that the Walrasian demands satisfy homogeneity of degree zero in (p, w) and Walras' law.

- For each indirect utility, check that it is non-increasing in prices and non-decreasing in wealth.

Question 2 Solve Exercise 2.E.4 in Mas Colell-Whinston-Green.

Question 3 Solve Exercise 3.C.5 part a) in Mas Colell-Whinston-Green.

Question 4 Solve Exercise 3.D.3 part a) of Mas Colell-Whinston-Green.

Question 5 Solve Exercise 3.E.3 of Mas Colell-Whinston-Green.

Question 6 Consider preferences represented by the constant elasticity of substitution (CES) utility function:

$$u(x_1, x_2) = (x_1^\rho + x_2^\rho)^{1/\rho}$$

- Compute the Hicksian demands for goods 1 and 2 and the expenditure function.

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