

Problem Set 1

Due Monday 12th, April.

1. Consider a two-consumer, two-good exchange economy. The consumers have identical preferences given by $u^1(x_1, x_2) = u^2(x_1, x_2) = x_1x_2$. Their initial endowments are $e^1 = (1, 1)$, $e^2 = (1, 3)$. Compute the Walrasian equilibrium price and allocation.

2. An exchange economy has three consumers and three goods. Consumers' utility functions and initial endowments are as follows:

$$\begin{aligned}u^1(x_1, x_2, x_3) &= \min\{x_1, x_2\} & e^1 &= (1, 0, 0), \\u^2(x_1, x_2, x_3) &= \min\{x_2, x_3\} & e^2 &= (0, 1, 0), \\u^3(x_1, x_2, x_3) &= \min\{x_1, x_3\} & e^3 &= (0, 0, 1).\end{aligned}$$

Find the Walrasian equilibrium price and allocation.

3. Solve Exercise 5.18 in Jehle and Reny.