

1. Imagine a two-consumer (A, B) and two-good (x_1, x_2) economy in which the total endowment of good 1 is 1 and the total endowment of good 2 is 2. Both consumers have utility functions given by

$$U(x_1, x_2) = \min\{x_1, x_2\}.$$

- (a) What is the set of Pareto efficient allocations in the economy?
- (b) If the endowment vector of each consumer is given by

$$(\omega_1, \omega_2) = \left(\frac{1}{2}, 1\right),$$

what is the set of competitive equilibria? If the endowment vector of each consumer A is

$$(\omega_1^A, \omega_2^A) = \left(\frac{1}{2}, \frac{1}{2}\right)$$

and that of consumer B is

$$(\omega_1^B, \omega_2^B) = \left(\frac{1}{2}, \frac{3}{2}\right),$$

what is the set of competitive equilibria?