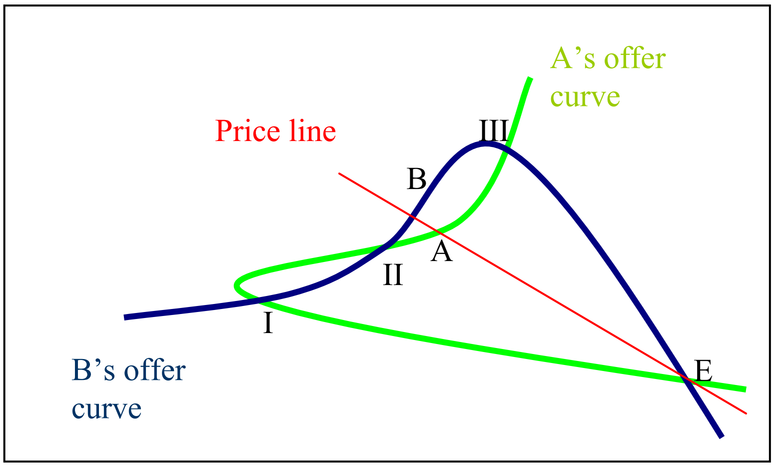
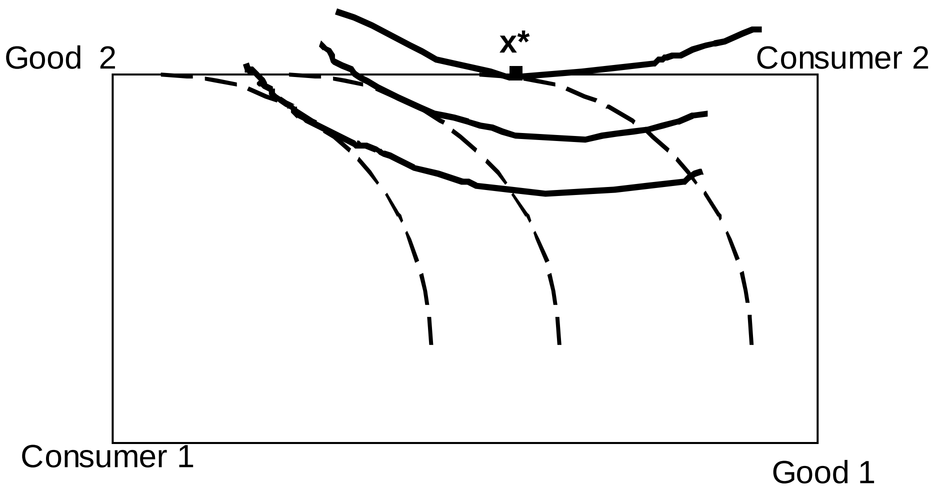
1.G.Yohe „Exercises to Varian textbook”, p.257-262
Consider the following figure. Argue that I and III are stable equilibria, but that II is an unstable equilibrium.

Consumer B




Consumer A

2. H.Varian “Microeconomic Analyses”, p.336, 17.3
Consider another figure. Explain why x* is a Pareto efficient allocation. Explain why x* is not a competitive equilibrium. Show another example of nonexistence of Walrasian equilibrium




3. H.Varian “Microeconomic Analyses”, p.337, 17.9
Consider an economy with 15 consumers and 2 goods. Consumer 3 has a Cobb-Douglass utility function $U_3(x_3^1, x_3^2) = \ln x_3^1 + \ln x_3^2$. At a certain Pareto efficient allocation x*, consumer 3 holds (10, 5). What are the competitive prices that support the allocation x*?

4. Mas-Colell, “Microeconomic Theory”, p.542, 15.B.10.c
In a two-consumer, two commodity pure exchange economy with continuous, strictly convex and strongly monotone preferences, consider the comparative statistics of the welfare of consumer 1 with changes in the initial endowment $\omega_1 =(\omega_{11},\omega_{21})$ and $\omega_2 =(\omega_{12},\omega_{22})$. Suppose that the increase in resources of consumer 1 constitute a small transfer from consumer 2, that is $\omega_1` = \omega_1+z$ and $\omega_2` = \omega_2-z$ with $z \geq 0$. Show that it is possible for the utility of consumer 1 to decrease (this is called the **transfer paradox**).

5. Mas-Colell, “Microeconomic Theory”, p.544, 15.D.7
Suppose there are two output goods and two factors. The production function for the two outputs are $f_1(z_{11},z_{21})=2z_{11}^{1/2}+z_{21}^{1/2}$ and $f_2(z_{12},z_{22})=z_{12}^{1/2}+2z_{22}^{1/2}$. The international prices for these goods are $p=(1,1)$. Firms are price takers and maximize profits. The total factor endowments are $z=(z_1,z_2)$. Consumers have no taste for the consumption of factors of production. Derive the equilibrium factor allocation $((z_{11}^*,z_{21}^*), (z_{12}^*,z_{22}^*))$ and the equilibrium factor prices $(w_1^*,w_2^*)$ as a function of $(z_1,z_2)$.