

End-of-chapter Questions

Chapter 3: The Fundamental Theorems of Welfare Economics

Questions 1 to 5 refer to the 2-good (X and Y), 2 factor (K and L) general equilibrium model of Chapter 3, in which the supplies of K and L are fixed. Question 6 refers to the same model, but with variable factor supplies, as discussed in the Appendix to the chapter.

1. In the general equilibrium model of Chapter 3, what are the three pareto optimal conditions and why must they hold to achieve an efficient allocation of resources?
2. Why are all three pareto optimal conditions satisfied if markets are perfectly competitive?
3. Suppose the firms that produce X have market power and are profit maximizers. How would they set their price and output? Which pareto optimal condition would this violate and why?
4.
 - a. What condition/s is/are required for the economy to be on its production possibilities frontier? Explain.
 - b. What condition/s is/are required for the economy to be on its utility possibilities frontier? Explain.
5. Suppose all three pareto optimal conditions hold and the economy is perfectly competitive. Is society's goal of end-results equity satisfied? Why or why not? Is society's goal of process equity satisfied? Why or why not?
6.
 - a. Why are there more than three pareto optimal conditions to be satisfied for an efficient allocation of resources in the 2-good, 2 factor general equilibrium when the supplies of capital and labor are variable?
 - b. Name one of the additional pareto optimal conditions and show that it is satisfied if the market economy is perfectly competitive.