Homework 32

The homework is due Wednesday, Sept. 20 during class.

Question 1 2.F.3

Question 2 2.F.4

Question 3 2.F.7

Question 4 In class we proved that the substitution matrix is negative semidefinite. In order to derive this result, do we need homogeneity of degree zero?

Question 5 Suppose that \( L = 2 \). Prove that the revealed preferences are transitive if the weak Axiom is satisfied.

1. Proceed by means of graphs, i.e., depict the standard situations that can occur where \( x \succeq^* y \), and \( y \succeq^* z \) and show in the graph that \( z \succ^* z \) cannot occur.

2. Try to formalize the graphic argument.

Question 6 Find an example for \( L = 3 \) where \( x \succeq^* y \), \( y \succeq^* z \), but \( x \not\succeq^* z \). First sketch an example. Then find some numerical values. Also, you don’t need to specify a complete demand function.