

Economic Dynamics

Homework 7: Due December 28, 2016, 11:00am

Requirements

Submit your homework *by email to*

"Economic Dynamics" <dynamics-hw@turnbull.sk.tsukuba.ac.jp>

The **Subject:** should be FH21051 Homework #7 (in hankaku romaji). Use this class number, even if you are registered according to a different code. Your email must contain your *name* and *student ID number*.

Problems

Submit your answers **by email** to dynamics-hw@turnbull.sk.tsukuba.ac.jp. Due **Wednesday, December 28, 2016 11:00 am**. The **Subject:** should be FH21051 Homework #7.

Submit your homework in the form of an Excel file attachment.

Consider the logistic equation $x_{t+1} = \lambda x_t(1 - x_t)$.

1. Create a spreadsheet using Excel or similar program which computes the series x_0, x_1, x_2, \dots, T such that you can specify λ in one cell, and the initial value x_0 at the head of the series.
2. By changing λ from 0 to values up to 4, observe various different long run behaviors of $\{x_t\}$. It may be useful to graph x *vs.* t .
3. What happens for $\lambda > 4$?
4. How big does T have to be to reach the "long run" for each λ ?

Be sure to keep a record of all λ and T you tried.