Where to run it: Atom or can be run from arbitrary Julia terminal

Must have package(s): Plots, LinearAlgebra, DelimitedFiles, JuMP (Version 0.18.5 will need to change optimization syntax if on newer version), GLPKMathProgInterface,

Must have programs: GLPK

Julia version: 1.1.0

Must do: Go to where the file is saved and put in computer address you want it saved it is marked as !!!Location!!!

If the above has been done, then code should run without a problem.

The programs attached labeled with Q3 are set up to run when included or ran outright once the must do has been satisfied this is only present in Q3\_runner.jl. Also, this script creates a function so one can check the maximum translation rate at any inducer concentration. The function is called Max\_Translation\_rate(ii), ii being the inducer concentration.

For Q3.C\_runner.jl. The vector displayed at the end its all the shadow prices displayed in the numerical order of their exchange flux reaction indexes.

Also see PDF Q3 for all the derivations for this question.