Lecture 3

Objectives

1. Matlab basics
2. Operations in Matlab   } chapter 2
3. Plotting in Matlab
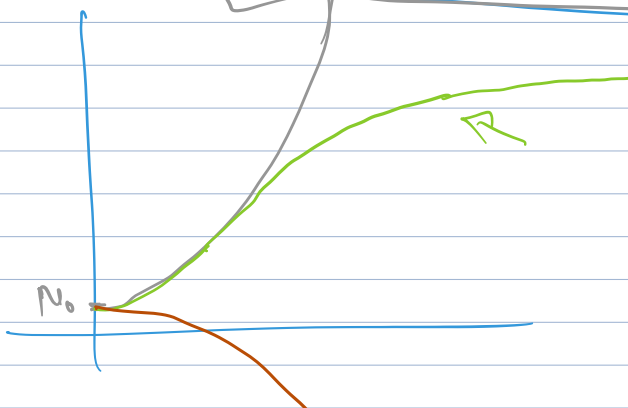4. Script files in Matlab   } chapter 3
5. Function files in Matlab

It is not just a programming language but a
programming environment

- editors
- Command prompt
- interpreter/compiler
- documentation

In the last lecture

$N = N(t) = $ number of cancerous cells at time t

$$\frac{dN}{dt} = \left(\frac{r}{m}\right) N(t) \ln\left(\frac{1}{N(t)}\right) - \delta(t) N(t)$$

R

$N \geq 1$

$\ln\left(\frac{1}{N}\right) < 0$

N_0

Assume that

N_{mem} = maximum number of cells a container could hold

$$\ln\left(\frac{1}{N(t)}\right) \implies \ln\left(\frac{N_{mem}}{N(t)}\right)$$

$$\frac{dN}{dt} = \frac{r}{m} N(t) \ln\left(\frac{N_{man}}{N(t)}\right) - \delta(t) N(t)$$

$$N(0) = N_0$$