Practice 7 Consider the predator-prey model:

(7.1)

where x and y are competing predators, and z is the prey.

Initial conditions are given by , , (7.2)

where

**Tasks**

1. Solve model (7.1) with initial conditions (7.2) using the Runge-Kutta method.

2. Select the model parameters to obtain the following cases:

a) , and ;

b) equilibrium state of the system, i.e. all the species coexist;

c) , y and z remain stable (coexist).

3. Draw the graphs for all the given cases.