

Math 473/573  
Fall 2016

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Homework 2

1. Textbook problem 2.3.3 (tumor growth - Gompertz law)
  - (a) Write a code to simulate the differential equation.
  - (b) Graph the solutions for various representative values of  $a$  and  $b$ .
  - (c) Find all the fixed-points and classify their stability.
  
2. Textbook problem 2.3.3 (the Allee effect)
  - (a) Write a code to simulate the differential equation.
  - (b) Graph the solutions for various representative values of  $r$ ,  $a$  and  $b$ .
  - (c) Answer items b, c and d.