Assignment 2

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

1) For an interactive plot in python a function needs to be previously defined. The statement is:
   a. True
   b. False
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. True

2) Which library is used to add an interactive slider to graphs in python?
   a. Notebook
   b. ipywidgets
   c. matplotlib
   d. numpy
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. numpy
   b. ipywidgets

3) The code for an interactive plot in python is given as x = interact(plt.plot, x=(0,1,10,0.05), n=(20,100,50)) the slider for variable is in the interactive plot will vary from ______ to ______ in steps of ______.
   a. 20, 30, 0
   b. 20, 100, 0.05
   c. 0, 1, 20, 5
   d. 0.1, 1, 0.05
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. 20, 100, 0.05
   b. 20, 100, 0.05
   c. 0, 1, 20, 5
   d. 0.1, 1, 0.05

4) In python which function is used to numerically integrate a system of ordinary differential equations given an initial value
   a. solve
   b. bisection
   c. solve_system
   d. solve_bvp
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. solve
   b. bisection
   c. solve_system
   d. solve_bvp

5) Which of the output of the command sol = solve_system(f, x=(-3,10), [2]) gives the times at which the solver found values?
   a. sol.t
   b. sol.t[0]
   c. sol.t
   d. sol.V
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. sol.t
   b. sol.t[0]
   c. sol.t
   d. sol.V

6) In python which function returns the roots of the non-linear equations defined by func(x)=0 given a starting estimate
   a. solve
   b. bisection
   c. solve_system
   d. solve_bvp
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. solve
   b. bisection
   c. solve_system
   d. solve_bvp

7) Which function in python finds a root of a real or complex function using the Newton-Raphson (or secant or Halley’s) method.
   a. tellsec
   b. qeck
   c. secant
   d. bisection
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. secant
   b. bisection

8) For the command sol = solve_system([f1, f2, func_0], [2], [0], [2], [2]), what will be the output of sol[5] for a converged solution?
   a. 0
   b. 1
   c. 2
   d. 3
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. 0
   b. 1
   c. 2
   d. 3

9) In python, the number of elements of ________ will be the number of roots that sol.eq has found.
   a. sol[5]
   b. sol[1]
   c. sol[3]
   d. sol[9]
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a. sol[5]
   b. sol[1]
   c. sol[3]
   d. sol[9]

10) What is the default method used in solve_system to solve an initial value problem for a system of ODEs in python?
    a. RK23
    b. RK4
    c. RK2
    d. BDF
    
    No, the answer is incorrect.
    Score: 0
    Accepted Answers:
    a. RK23
    b. RK4