Scilab Exercise in class

1. Bulit a function that calculate distance between two point
   1. Input: give two point (in x, y coordinate) as input to a function
   2. Output: the distance between the two points
2. Built a function that calculate runge equation and display a plot.
3. Find the value for
4. Built a function that calculate power 3 of a number and calculate using your function the result for
   1. 53
   2. [1,3,5,7,9,11,…,29]3
5. Display students grade when the input is marks. The info is as below
   1. 90-100:A; 80-89: AM; 70-79: BP; 60-69: B; 50-59: BM; 45-49: CP; 40-44: C; 35-39: CM; 30-34: D; 0-29: E
   2. Percentage distribution: Tutorial: 20%, Quiz: 20%, Project: 30%, Final: 30%
   3. Testing input
      1. Student1:
         1. 5 Tutorials mark : 6,8,3,9,5 (Total tutorial marks 50)
         2. 3 quizes mark: 8,4,6 (Total quiz marks 30)
         3. Projek: 20 (total project mark 30)
         4. Final mark: 45 (total final mark 100)
      2. Student2:
         1. 5 Tutorials mark : 3,8,7,7,7 (Total tutorial marks 50)
         2. 3 quizes mark: 4,5,6 (Total quiz marks 30)
         3. Projek: 25 (total project mark 30)
         4. Final mark: 65 (total final mark 100)
6. Solve this ODE problem using Scilab

for .

* 1. Develop scilab code for Euler, Modified Euler Method, fourth order Adam-Bashforth method and 2nd order Runge-Kutta (Heun method).
  2. Estimate at
  3. Plot graph y for
  4. How you can increase the accuracy of the approximation? Give proof.
  5. Solve using Scilab Built-in function using Adam predictor-corrector method, fourth order Runge-Kutta method and Runge-Kutta Fehlberg method.

1. Solve this ODE problem using Scilab

for .

* 1. Develop scilab code for Euler, Modified Euler Method, fourth order Adam-Bashforth method and Fourth order Runge-Kutta method.
  2. Estimate at
  3. Plot graph y for
  4. How you can increase the accuracy of the approximation? Give proof.
  5. Solve using Scilab Built-in function using Adam predictor-corrector method, fourth order Runge-Kutta method and Runge-Kutta Fehlberg method.