Problems for Tutorial-I: Basics of Scilab

1. Write a Scilab script to compute the following:

   (a) $n_1 = \sqrt{(Ax - y)^T (Ax - y)}$

   (b) $n_2 =$ Sum of elements of $(Ax - b)$ (Hint: Use sum command)

   (c) $n_3 =$ Sum of square of the elements of $(Ax - b)$ (Hint: Use for loop)

   where $A = \begin{bmatrix} a & a^2 & a^3 \\ b & b^2 & b^3 \\ c & c^2 & c^3 \end{bmatrix}$, $a = 1, b = 2, c = 3$, $x = \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}$, $y = \begin{bmatrix} 4 \\ 12 \\ 36 \end{bmatrix}$.

2. Write a Scilab script to save the solution of Problem 1, i.e., $\begin{bmatrix} n_1 & n_2 & n_3 \end{bmatrix}$ as Problem2.csv file.