COMP 3006 Programming Assignment 10

Assignment 10.1:

Apply Cramer's Rule to solve simultaneous linear equations of 3 unknowns.

The coefficient matrix A is as follows:

A = np.array([[5, -14, -3], [1, 2, 2], [-7, 4, 5]]),

and the constants are: -39, -2, and -29.

Hint: For the determinant of matrix A use np.linalg.det(A).

Assignment 10.2:

Eight students' grades in the respective courses are given via this dictionary:

{'Math' : [80, 89, 93, 66, 84, 85, 74, 64],

'Science' : [94, 76, 88, 78, 88, 92, 60, 85],

'English' : [83, 76, 93, 96, 77, 85, 92, 60],

'History' : [96, 66, 76, 85, 78, 88, 69, 99]}

Form the corresponding pandas dataframe and report the means and standard deviations by student and by course. Provide the 5-number summary for each course.

Upload a zip of your source file(s).