

Info 3 Introduction to MATLAB®

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Homework 2

Instructions

- Submit your MATLAB code and results in a single script file named `hw2_yourName.m`.
- Include comments in your script explaining each step.

Task 1: Vector manipulation (4.5 pts)

1. Create a row vector V1 containing the first 5 even numbers greater than 10.
2. Create another vector V2 containing the remainders of dividing the elements of V1 by 2.
3. Calculate and display:
 - a. The difference between the root of the elements in V1 and V2.
 - b. The root of each element at an even position in V1.

Task 2: Matrix construction (5.5 pts)

1. Construct a 5-by-4 matrix A where: $A(i, j) = 2i^2 - j$
2. Extract and display
 - a. The first column of the matrix A .
 - b. The matrix containing the elements indicated in the figure shown opposite.
 - c. Replace the indicated elements with their sinus.

x	x	x	x
x	x	x	x
x	x	x	x
x	x	x	x
x	x	x	x

Task 3: Application (5 pts)

The following matrix G represents the scores of five students (rows) in four subjects (columns).

1. Compute and display:
 - a. The average score of each student.
 - b. The average score of each subject.
 - c. The student having the lowest average score.
2. Normalize the G matrix such that all values are between 0 and 1 and display the new matrix

	Math	Ph	Inf	Ch
Ahmed	15	11	13	9
Omar	18	14	16	17
Ali	8	11	9	7
Farid	16	10	15	12
Salim	15	16	12	14

G