2 Arrays.

2.01 Given a list of N values calculate the arithmetic mean.

2.02 Given a list of N values determine the Median (N is odd and all values are distinct)

2.03 When rolling a die N times determine the frequency of the numbers from 1 to 6.

2.04 Given a list of N elements exchange its elements so the list be in reverse order.

2.05 Sort a list of N elements in ascending order.

2.06 Given a list of N values determine the number that appears more times and the positions in the list where it appears.

2.07 Calculate the arithmetic mean of a list of N values and print all the values that are higher than the mean.

2.08 Given a list of N numbers calculate how many are distinct.

2.09 Calculate the scalar product of two vectors.

2.10 Given a polynomial p(x) of the form p(x) = anxn + an-1xn-1 + ... + a1x + a0 where a0, a1, ..., an are the coefficients of the polynomial and n the degree, calculate the polynomial value for a given value of x.

2.11 Given the degree of two polynomials and the respective coefficients calculate the degree and the coefficients of the polynomial product.

2.12 Given a list of N integer values place the even numbers in the first half of the list and the odd numbers in the second half of the list.
Ex: N: 5 24, 15, 30, 13, 34 A: 24, 34, 30, 13, 15

2.13 Consider that you have the number of students (N) in a course, the list of marks obtained by these students in a discipline and the list of numbers of the class to which they belong. Calculate the arithmetic mean of the marks obtained by the students in each class.
(Note: Consider that there is no more than 6 classes)
Ex: Number of students: 10

marks	12	13	10	10	14	16	12	10	10	14
Class	1	2	1	3	1	3	3	2	2	3

R:

Class	*Mean*
1	12
2	11
3	13

2.14 Given a list with N integer values between 10 and (10 + N - 1), do the following:
a) eliminate repeated values from the vector.
b) add new values in the vector so that contains all integer values from 10 to (10 + N - 1).
Ex: N = 6 10, 13, 10, 14, 13, 15
A: a) 10, 13, 14, 15 b) 10, 13, 14, 15, 11, 12

2.15 Convert a number in base 10 to base b.