Welcome to your first homework!

The following notations are adopted in this document:

- **Titles are written in bold**
- `Code and/or input/output uses preformatted text`
- Normal text or notations are written with standard font

This homework need at maximum 2 hours. Good luck!

1) Write a program that calculates the distance between 2 point expressed as a pair of cartesian coordinates (x,y)

Ex. Test Data :

```
x1: 25
y1: 15
x2: 35
y2: 10
```

Expected Output:

```
Distance between points: 11.1803
```

Suggestion: include the math.h library and use sqrt() function

2) Write a simple program that read an amount (integer value) and break it into smallest possible number of bank notes (100,50,20,10,5,2 and 1€).

Ex. Test Data :

```
Input the amount: 375
```

Expected Output:

```
There are:
3 Note(s) of 100.00
1 Note(s) of 50.00
1 Note(s) of 20.00
0 Note(s) of 10.00
1 Note(s) of 5.00
0 Note(s) of 2.00
0 Note(s) of 1.00
```

3) Given a,b and c (the coefficients od a second degree polynomial) solve the equation $a*x^2+b*x+c=0$

Ex. Test Data :

```
First coefficient (a): 25
Second coefficient (b): 35
Third coefficient (c): 12
```

Expected Output:

```
Root1 = -0.60000
Root2 = -0.80000
```

Suggestion: include the math.h library and use sqrt() function. Check that the given input numbers lead to a valid (and computable) result

4) Write a program that read an integer number and print all its divisor

Test Data:

```
Input an integer: 45
```

Expected Output:

```
All the divisor of 45 are:
1
3
5
9
15
45
```

5) Draw a flow-chart for each of the previous exercises