Assignment 1

Submission Guideline:

There are 13 problems in this assignment. You will submit exactly 13 files in .c extension.

File Name Format:

AssignmentNo_Roll_ProblemNo.c

Example: A1_R99_P1.c

Problems

---

1. Write a program that will take 5 numbers as input and print their summation.

   Example:

   Please enter 5 numbers:

   10 20 22 24 56

   Sum: 142

2. Write a program that will take 5 numbers as input and print their average.

   Example:

   Please enter 5 numbers:

   10 20 22 24 56

   Average: 26.40

3. Write a program that will take a Fahrenheit value as input and show the corresponding Celsius value.

   Example

   Please enter the Fahrenheit value:

   2100

   2100F = 1148.89C

4. Write a program that will take a 6 digit integer number as input and show each digit of the number in a separate line. Also, print the sum of digits.

   Example:

   Please enter a 6 digit number:

   349701

   Digits are:

   3

   4

   9

   7

   0

   1

   Sum of digits = 24

5. Write a program that will take the initial money deposited in an account (integer) and yearly cumulative interest rate (float) as inputs. Now print the money at the end of each of the 4 years.

   Example:

   Enter initial money: 5600

   Enter interest rate in percentage: 12.5

Year	Interest	Total Interest	Accrued Amount
1	700.00	700.00	6300.00
2	787.50	1487.50	7087.50
3	885.94	2373.44	7973.44
4	996.68	3370.12	8970.12

6. Write a program, that will solve the equation $ax^2+bx+c = 0$. Take a,b,c as input (integer). And show the value(s) of x as output.

   Example:

   Enter a: 2

   Enter b: 5

   Enter c: -30

   x = -5.32, 2.82

7. Take a number n as input and show the multiplication table for n.

   Example:

   Enter n: 7

   Multiplication table for 7

```
******************
7 X 1   =  7
7 X 2   = 14
7 X 3   = 21
...
7 X 10  = 70
******************
```

8. Given radius of a circle (float), print the area and perimeter of that circle.

9. Given three sides of a triangle (integer), print the area of that triangle.

   Example:

   Enter sides: 8 5 7

   Area = 17.32

10. Write a program to calculate Euclidian distance between two Cartesian points.

    Example:

    Enter 1st point's x co-ordinate: 5

    Enter 1st point's y co-ordinate: 10

    Enter 2nd point's x co-ordinate: 18

    Enter 2nd point's y co-ordinate: 7

    Distance = 13.34

11. Given a time in seconds (integer), convert it to year, month, hour, minute and second.

    Example:

    Enter second value: 54871963

    1 year 9 month 5 day 2 hour 12 minute 43 second

12. Write a program to take as input 6 things as shown below.

    Now show a chart showing price for each element as well as total price in a chart form.

    Example:

```
Please enter price of rice per KG: 40
How much rice (KG)? 5
Please enter price of sugar per KG: 65
How much sugar (KG)? 7
Please enter price of milk per litre 35
How much milk (Litre)? 15
Price Table:
************************************************************
Item           Unit Price        Unit Purchased    Total Price
************************************************************
Rice           40                 5                200 TK
Sugar          65                 7                455 TK
Milk           35                15                525 TK
************************************************************
                                 Total Price       1180 TK
```

13. **$s = ut + (at^2)/2$**. Take as input u, a and t. Calculate s using the formula. Print the value of s. Use double.