

Homework1:

Write programs in JAVA

Exercise1:

Write a program to calculate the area of a circle.

Exercise2:

Write a program that reads an integer and prints its double, its triple, remainder of its division by 5

Exercise3:

Write a program that reads the value of a temperature in Celsius ($^{\circ}C$) and prints it to Fahrenheit ($^{\circ}F$).

Remark: $^{\circ}F = 1.8 * ^{\circ}C + 32$

Exercise4:

Write a program that reads an integer value x and displays whether x is an even or odd number.

Exercise5:

A four-digit number ABCD is called Lucky if $A + B = C + D$. Write a program that asks the user to enter a four-digit number n and prints whether n is a Lucky number or not.

Example:

- The number 3719 is a Lucky number since $3 + 7 = 1 + 9$
- The number 3521 is not a Lucky number since $(3 + 5) \neq (2 + 1)$.

Exercise 6:

Write a program that reads N numbers and then prints the minimum value of these numbers. N is a positive integer number entered by the user.

Exercise 7:

Consider the following sequence given by the recurrence relation:

$$U_1 = -1, U_2 = 1, U_3 = 2, U_N = 2 * U_{N-1} - 5 * U_{N-2} + U_{N-3} + 2 \text{ if } (N > 3)$$

Write a program that enters an integer value N and then prints the values of N-th term U_N and the sum S_N

$$S_N = \sum_{n=1}^N U_n$$

Exercise 8:

Write a program that enters the values of two integers numbers X and N and then prints the value of the following sum:

$$\frac{1}{x} + \frac{1}{x+1} + \dots + \frac{1}{N} \text{ if } N > x$$

$$\frac{1}{N} + \frac{1}{N+1} + \dots + \frac{1}{x} \text{ if } x > N$$

$$\frac{1}{N} \text{ if } N \text{ is equal to } x$$

Exercise 9:

Write a program which reads a positive integer value N and indicates if N is a perfect number or not (N is a perfect number if $N =$ the sum of its divisors without the number itself).

Exercise 10:

Write a program which reads a positive integer value n , calculates and shows the result of the expression:

$$\sum_{i=1}^n \frac{i+3}{i^2-5}$$

