Exercise 2: Create a function with variable length of arguments

Write a program to create function `func1()` to accept a variable length of arguments and print their value.

Note: Create a function in such a way that we can pass any number of arguments to this function, and the function should process them and display each argument's value.

Read: variable length of arguments in functions

Function call:

```
# call function with 3 arguments
func1(20, 40, 60)

# call function with 2 arguments
func1(80, 100)
```

Expected Output:

```
Printing values
20
40
60


Printing values
80
100
```

Exercise 4: Create a function with a default argument

Write a program to create a function `show_employee()` using the following conditions.

- It should accept the employee's name and salary and display both.
- If the salary is missing in the function call then assign default value 9000 to salary

See: Default arguments in function

Given:

```
showEmployee("Ben", 12000)
showEmployee("Jessa")
```

Expected output:

```
Name: Ben salary: 12000
Name: Jessa salary: 9000
```

Exercise 5: Create an inner function to calculate the addition in the following way

- Create an outer function that will accept two parameters, `a` and `b`
- Create an inner function inside an outer function that will calculate the addition of `a` and `b`
- At last, an outer function will add 5 into addition and return it

Exercise 6: Create a recursive function

Write a program to create a **recursive function to calculate the sum of numbers** from 0 to 10.

A recursive function is a function that calls itself again and again.

Expected Output:

55

Lambda Function:
Ref: https://www.w3schools.com/python/python_lambda.asp

1. Write a Python program to create a lambda function that adds 15 to a given number passed in as an argument, also create a lambda function that multiplies argument x with argument y and print the result. Go to the editor

Sample Output:

25

48

2. Write a Python program to create a function that takes one argument, and that argument will be multiplied with an unknown given number. Go to the editor

Sample Output:

Double the number of 15 = 30

Triple the number of 15 = 45

Quadruple the number of 15 = 60

Quintuple the number 15 = 75

3. Write a Python program to sort a list of tuples using Lambda.

Original list of tuples:

[('English', 88), ('Science', 90), ('Maths', 97), ('Social sciences', 82)]

Sorting the List of Tuples:

[('Social sciences', 82), ('English', 88), ('Science', 90), ('Maths', 97)]

5. Write a Python program to filter a list of integers using Lambda. Go to the editor
Original list of integers:
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
Even numbers from the said list:
[2, 4, 6, 8, 10]
Odd numbers from the said list:
[1, 3, 5, 7, 9]

15. Write a Python program to add two given lists using map and lambda. Go to the editor
Original list:
[1, 2, 3]
[4, 5, 6]
Result: after adding two list
[5, 7, 9]