

# Week 4 Exercises

## 1) Create a 4 basic math operations calculator using functions.

**Solution:**

```
#Week 4 Exercises:
```

```
# Calculator
```

```
def add(x,y):  
    return x+y
```

```
def sub(x,y):  
    return x-y
```

```
def mul(x,y):  
    return x*y
```

```
def div(x,y):  
    return x/y
```

```
addition = add(3,4)  
subtraction = sub(3,4)  
multiplication = mul(3,4)  
division = div(3,4)
```

```
print("Addition: ", addition, "\nSubtraction: ", subtraction, "\nMultiplication: ",  
multiplication, "\ndivision: ", division)
```

**2) Create a program that calculates the average of 4 marks, as follows:**

- **The first function calculates the sum of the marks and returns the sum**
- **The second function takes the sum as a parameter, and calculates the average and prints it.**

**Solution:**

#Week 4 Exercises:

# Average Calculator

```
def summation(firstMark,secondMark,thirdMark,forthMark):  
    return (firstMark+secondMark+thirdMark+forthMark)
```

```
def average(sumOfMarks):  
    print(sumOfMarks/4)
```

Mark1 = 60

Mark2 = 55

Mark3 = 80

Mark4 = 77

```
sumOfAll = summation(Mark1, Mark2, Mark3, Mark4)  
average(sumOfAll)
```

*#Note: After exercise 3, ask the students to use input function to enter the marks.*

**3) Create a program that takes a decimal input from the student and returns its binary equivalent using functions.**

**Solution:**

#Week 4 Exercises:

# Average Calculator

```
def converter(decimal):  
    return bin(decimal)
```

```
dec = input("Please enter a decimal number: ") #Built-in function that takes input from the user  
dec = int(dec) #Try to remove this line and see what happens  
binary = converter(dec) #Function Call  
print(binary.replace("0b", "")) #The replace will remove the 0b from the binary number
```