

# PIAIC Q1 ASSIGNMENT

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## 1. Calculate Area of a Circle

### Code

```
from math import pi
r = float(input("Enter radius of circle"))
a = pi * r**2
print("Area of circle:",a);
```

### Result

Enter radius of circle10

Area of circle: 314.1592653589793

## 2. Check Number either positive, negative or zero

### Code

```
num = int(input("Enter any number :"))
if(num > 0):
    print("Positive")
elif(num < 0):
    print("Negative")
elif(num == 0):
    print("Zero")
```

### Result

Enter any number :10

Positive

Enter any number :-10

Negative

Enter any number :0

Zero

### 3. Divisibility Check of two numbers

#### **Code**

```
num1 = int(input("Enter first number :"))
num2 = int(input("Enter second number :"))
if(num1 % num2 == 0):
    print("Completely divisible")
else:
    print("Not completely divisible")
```

#### **Result**

Enter first number :6

Enter second number :2

Completely divisible

Enter first number :100

Enter second number :3

Not completely divisible

### 4. Calculate Volume of a sphere

#### **Code**

```
from math import pi
r = int(input("Enter radius of Sphere :"))
v = (4/3) * pi * r**3
print("volume of Spehere is: ",v);
```

#### **Result**

Enter radius of Sphere :1

volume of Spehere is: 4.1887902047863905

## 5. Copy string n times

### Code

```
word = input("Enter any word :")  
rpt = int(input("Enter number of repetition :"))  
print(word*rpt)
```

### Result

```
Enter any word :Pakistan  
Enter number of repetition :5  
PakistanPakistanPakistanPakistanPakistan
```

## 6. Check if number is Even or Odd

### Code

```
num = int(input("Enter number to check, Even or Odd :"))  
if(num % 2 == 0):  
    print("Even")  
elif(num % 2 == 1):  
    print("Odd")
```

### Result

```
Enter number to check, Even or Odd :2  
Even
```

```
Enter number to check, Even or Odd :9  
Odd
```

## 7. Vowel Tester

### Code

```
vowel = "aeiou"  
letter = input("Enter letter to test, vowel or not: ")  
if(letter in vowel):
```

```
    print("Vowel")
else:
    print("Not vowel")
```

### **Result**

Enter letter to test, vowel or not: a  
Vowel

Enter letter to test, vowel or not: z  
Not vowel

## **8. Triangle area**

### **Code**

```
base = float(input("Enter value of triangle base: "))
height = float(input("Enter value of triangle height: "))
area = 0.5 * base * height
```

```
print("Area of triangle is: ",area)
```

### **Result**

Enter value of triangle base: 1  
Enter value of triangle height: 2  
Area of triangle is: 1.0

## **9. Calculate Interest**

### **Code**

```
value = float(input("Enter your Principal value: "))
rate = float(input("Enter interest rate: "))
years = int(input("Enter number of years to grow: "))
```

```
for i in range(years):
    value += value * (rate)
```

```
print("Final value is:",value)
```

## **Result**

Enter your Principal value: 10000  
Enter interest rate: 0.1  
Enter number of years to grow: 5  
Final value is: 16105.1

Enter your Principal value: 50  
Enter interest rate: 10  
Enter number of years to grow: 10  
Final value is: 1296871230050.0

## **10. Euclidean distance**

### **Code**

```
x1 = input("Enter X1: ")  
y1 = input("Enter Y1: ")  
  
x2 = input("Enter X2")  
y2 = input("enter Y2")  
  
distance = ( (x1-x2)**2 + (y1-y2)**2 )**0.5
```

### **Result**

Enter X1: 2  
Enter Y1: 5  
Enter X2: 2  
enter Y2: 5  
Distance is: 0.0

Enter X1: 1  
Enter Y1: 2  
Enter X2: 3  
enter Y2: 4  
Distance is: 2.8284271247461903

## 11. Feet to cm

### Code

```
feet = float(input("Enter your feet: "))  
cm = feet * 30.48  
print(feet," Feet are ",cm, "cm")
```

### Result

```
Enter your feet: 5.5  
5.5 Feet are 167.64000000000001 cm
```

## 12. BMI Calculator

### Code

```
height = (float(input("Enter height in cm: "))/ 100)**2  
mass = float(input("Enter your mass in Kg: "))
```

```
bmi = mass/height  
print("Your BMI is", bmi)
```

### Result

```
Enter height in cm: 180  
Enter your mass in Kg: 75  
Your BMI is 23.148148148148145
```

## 13. Sum of n Positive IntegersCode

```
num = int(input("Enter numbe to sum to: "))  
Sum = 0  
for i in range(num+1):  
    Sum += i  
print("Sum is: ",Sum)
```

## **Result**

Enter numbe to sum to: 10

Sum is: 55

## **14. Digits Sum of a Number**

### **Code**

```
num = input("Enter any digit number: ")
Sum = 0
for i in range(len(num)):
    Sum += int(num[i])

print("Sum of digits: ",num," is", Sum)
```

### **Result**

Enter any digit number: 12345

Sum of digits: 12345 is 15