1. Write a python program to design simple calculator for the operators.

→ + (addition)

```
num1 = 1.5
num2 = 6.0

#Add two numbers
sum = num1 + num2
#Display the sum
print('sum of {0} and {1} is {2}'.format(num1, num2,
                                         sum))
```

Output:
The sum of 1.5 and 6.0 is 7.5

→ - (subtraction)

```
num1 = 10
num2 = 5
# sub two numbers
sub = num1 - num2
# display the sub
print('sub of {0} and {1} is {2}'. format(num1, num2,
                                          sub))
```

Output:
The sub of 10 and 5 is 5

→ * (multiplication)

```
num1 = 25
num2 = 4
mul = num1 * num2
print("Mul of {0} and {1} is {2}'. format(num1, num2,
                                          mul))
```

Output:
The mul of 25 and 4 is 100

→ / (division)

```
num1 = 20
num2 = 60
div = num1/num2
print("Div of {0} and {1} is {2}.format(num1, num2,
                                        div))
```

Output:
The div of 20 and 60 is 3

→ % (modulus)

```
num1 = 100
num2 = 20
mod = num1 % num2
print("Mod of {0} and {1} is {2}.format(num1, num2,
                                        mod))
```

Output:
The mod of 100 and 20 is 5

→ ** (exponent)

```
num1 = 10
num2 = 3
expo = num1 ** num2
print("Expo of {0} and {1} is {2}.format(num1, num2
                                        expo))
```

Output:
Expo of 10 and 3 is 1000

→ // (floor division)

```
num1 = 5.0
num2 = 2
floor division = num1 // num2
print("Floor division of {0} and {1} is {2}.format
    (num1, num2, floor division))
```

Output: Floor division 5.0 and 2 is 2.

2) Write a python program to calculate simple interest

```
P = float(input("Enter the principal amount: "))
N = float(input("Enter the number of years: "))
R = float(input("Enter the rate of interest : "))
SI = (P*N*R)/100
print("Simple interest : %f".format(SI))
```

Output: Enter the principal amount: 100
Enter the number of years : 5
Enter the rate of interest : 5
Simple interest : 25.

3) Write a python program to calculate area of a ~~circle~~ triangle

```
a = 5
b = 6
c = 7
s = (a+b+c)/2
area = s*(s-a)*(s-b)*(s-c)) * 0.5
print('The area of the triangle is %.0.2f' %.area)
```

Output: The area of the triangle is 14.70

4) Write a python program to calculate area of a circle.

```
r = float(input('Enter the radius of the circle:'))
area = math.pi*r*r
print("The area of circle is %.2f "%.area)
```

Output: The area of circle is 6.

5) Write a python program to calculate area of rectangle

```
l = float(input('Enter the length of the rectangle:')
b = float(input["Enter the breadth of the rectangle:")
area = l x b
print("Area of rectangle is %.2f "%.area)
```

Output l = 6
b = 6
Area of rectangle is 12

6) Write a python program to temperature in celsius to Fahrenheit.

```
celsius = 37.5
fahrenheit = (celsius * 1.8) + 32
print('%0.1f degree celsius is equal to %0.1f degree Fahrenheit' %(celsius, fahrenheit))
```

Output: 37.5 degree celsius is equal to 99.5 degree Fahrenheit.

7) Write a python program to calculate perimeter of a square.

```
s = int(input("side :"))
perimeter = 4*s
print("Perimeter of Square :", perimeter)
```

Output: side : 5
Perimeter of Square : 20

8) Calculate circumference of a circle.

```
PI = 3.14
r = float(input('Enter the radius: '))
circumference = 2 * PI * r
print("Circumference of a circle = %0.2f" % circumference)
```

Output:

r = 6
Circumference of a circle = 37.68

9) Write a python program to swap two numbers

```
x = 5
y = 10
temp = x
x = y
y = temp
print('The value of x after swapping : {}'.format(x))
print('The value of y after swapping : {}'.format(y))
```

Output:

```
The value of x after swapping : 10
The value of y after swapping : 5
```