

1. Write a python program to add , subtract, multiply, divide the the two numbers by taking input values and without taking the input values?

```
num1 = input('Enter First Number: ')
num2 = input('Enter Second Number: ')
sum = float(num1) + float(num2)
print('The sum of numbers {0} and {1} is {2}'.format(num1, num2, sum))
```

2. Write a Python program to find the average of three numbers

Hint : How to find the average of numbers

Average Formula = Total sum of all numbers / Number of item in the set

Mathematically,

Inputs: a=2, b=5, c=8

Average = $(a+b+c)/3 = (2+5+8)/3 = 15/3 = 5$

Python program to find average of three numbers

```
num1 = 3
num2 = 5
num3 = 14
avg = (num1 + num2 + num3)/3
print('The average of numbers = %0.2f' %avg)
```

3. Python program to find the average of three numbers by taking input values

```
num1 = float(input('Enter first number: '))
num2 = float(input('Enter second number: '))
num3 = float(input('Enter third number: '))
avg = (num1 + num2 + num3)/3
print('The average of numbers = %0.2f' %avg)
```

4. Write a Python program to calculate the simple interest

Hint : Simple Interest Formula

Simple Interest = $(P \times R \times T) / 100$

Where,

P is the principal amount

R is the rate of interest and

T is the time (number of years)

Mathematically,

Input : P = 1000

R = 5

T = 10

Simple Interest = $(1000 \times 5 \times 10) / 100 = 500$

```
P = float(input('Enter principal amount: '))
R = float(input('Enter the interest rate: '))
T = float(input('Enter time: '))
SI = (P * R * T) / 100
print('Simple interest = ',SI )
print('Total amount = ',( P + SI ))
```

5. Write a Python program to calculate the compound interest

Hint: Compound Interest Formula

$$A = P(1 + r/n)^{(n * t)}$$

Where,

A is the future value of the investment/loan, including interest

P is the principal amount

r is the annual rate of interest

n is the number of times that interest is compounded per unit t and

t is the time the money is invested (number of years)

The above formula gives the total amount. To find the compound interest use,

$$\text{Compound interest} = A - P$$

Mathematically,

Input :- P = 5000

r = 5/100 = 0.05

n = 12

t = 10

If we plug those figures into the formula, we get the following

$$A = 5000 (1 + 0.05 / 12)^{(12 * 10)} = 8235.05$$

$$\text{Compound Interest} = A - P = 8235.05 - 5000 = 3235.05$$

Total Amount is 8235.05 and compound Interest is 3235.05

```
principal = float(input('Enter principal amount: '))
rate = float(input('Enter the interest rate: '))
time = float(input('Enter time (in years): '))
number = float(input('Enter the number of times that interest is
compounded per year: '))
rate = rate/100
amount = principal * pow( 1+(rate/number), number*time)
# calculate compound interest
ci = amount - principal
print('Compound interest = %.2f' %ci)
print('Total amount = %.2f' %amount)
```

6. Write a Python program to find the square root

```
num = float(input('Enter the number: '))
sqrt = num ** 0.5
print('Square root of %.2f is %.2f'%(num, sqrt))
```

7. Write a Python program to find the area of the circle.

```
r = float(input('Enter the radius of the circle: '))
area = 3.14 * r * r
print('Area of circle = %.2f' %area)
```

8. Write a Python program to find the area of the rectangle.

```
length = float(input('Enter the length of the rectangle: '))
width = float(input('Enter the width of the rectangle: '))
area = length * width
print('Area of rectangle = ',area)
```

9. Write a Python program to find the area of the right-angle triangle.

```

base = float(input('Enter the base of the triangle: '))
height = float(input('Enter the height of the triangle: '))
area = (1/2) * base * height
print('Area of triangle = ',area)

```

10. Write a Python program to swap two variables using temporary variable

Example:-

a=5 and b=8

After swapping a and b, we get :

a=8 and b=5

Python program to swap two variables using temporary variable

```

a = input('Enter the value of a: ')
b = input('Enter the value of b: ')
print('Values Before Swapping')
print('a = ',a, 'and b = ',b)
temp = a
a = b
b = temp
print('Values After Swapping')
print('a = ',a, 'and b = ',b)

```

Python program to swap two numbers without using temporary variable

```

a = input('Enter the value of a: ')
b = input('Enter the value of b: ')
print('Values Before Swapping')
print('a = ',a, 'and b = ',b)
a, b = b, a
print('Values After Swapping')
print('a = ',a, 'and b = ',b)

```

11. Write a python program to convert Fahrenheit to Celsius Formula

Hint : Fahrenheit to Celsius formula is: $C = (F-32)/1.8$

```

print("Enter Temperature in Fahrenheit: ")
fah = float(input())
cel = (fah-32)/1.8
print("\nEquivalent Temperature in Celsius: ", cel)

```

12. Write a program to Display Calendar of a Month

```

import calendar
print("Enter Year: ")
yy = input()
print("\nEnter Month Number (1-12): ")
mm = input()
y = int(yy)
m = int(mm)
print("\n", calendar.month(y, m))

```

13. write a Python program to convert number of days into years, weeks and days

```

print("Enter the Number of Days: ")
num = int(input())

year = int(num/365)

```

```
week = int((num%365)/7)
days = int((num%365)%7)

print("Total Number of Year(s): ")
print(year)
print("Total Number of Week(s):")
print(week)
print("Total Number of Day(s):")
print(days)
```