

```
# Accept input from user and store it in variable and print the value
a=int(input("enter a number: "))
print(a)
a=46
print(a)
```

```
#Use of print statements and use of (.format )for printing different data types
a="my name is {name}, and iam in {place} now.".format(name="suhrruth",place="CMR central")
print(a)
```

```
# Take 2 numbers as user input and add, multiply, divide, subtract, remainder and print
# the output (Same operations on floating point input as well)
a=int(input("enter first number: "))
b=int(input("enter second number: "))
add=a+b
sub=a-b
mul=a*b
div=a//b
rem=a%b
print("addition= ",add)
print("subtract= ",sub)
print("multiply= ",mul)
print("division= ",div)
print("remainder= ",rem)
```

```
#Conversion of one unit to another (such as hours to minutes, miles to km and etc)
a=float(input("enter hours: "))
print("hours to minutes= ",a*60)
b=float(input("enter miles= "))
print("miles to km= ",b*1.5)
```

```
#Usage of mathematical functions in python like math.ceil, floor, fabs, fmod, trunc,
#pow, sqrt etc.
import math
a=float(input("enter a number: "))
b=float(input("enter second number: "))
print(math.ceil(a))
print(math.floor(a))
print(math.fabs(a))
print(math.fmod(a,b))
print(math.trunc(a))
```

```
print(math.pow(3,3))
print(math.sqrt(9))

# Building a mathematical calculator that can perform operations according to user input.
# Use decision making statement.
a=int(input("enter first number: "))
b=int(input("enter second number: "))
operation=str(input("enter operation to be performed: "))
if(operation=="add"):
    print(a+b)
elif(operation=="sub"):
    print(a-b)
elif(operation=="mul"):
    print(a*b)
elif(operation=="div"):
    print(a//b)
elif(operation=="rem"):
    print(a%b)
else:
    print("enter a valid operation")

# Printing all even numbers, odd numbers, count of even numbers, count of odd numbers
# within a given range.
n=int(input("enter a range: "))
print("even numbers: ")
c=0
for i in range(1,n+1):
    if(i%2==0):
        c+=1
        print(i)
print("no of even numbers are: ",c)
print("odd numbers: ")
d=0
for j in range(1,n+1):
    if(j%2!=0):
        d+=1
        print(j)
print("no of odd numbers are: ",d)

# Compute the factorial of a given number. b) Compute GCD of two given
# numbers. c) Generate Fibonacci series up to N numbers.
# factorial
a=int(input("enter a number: "))
f=1
for i in range(1,a+1):
    f=f*i
print(f)

# gcd of two numbers
```

```
a=int(input("enter first number: "))
b=int(input("enter second number: "))
k=a if (a<b) else b
while True:
    if(a%k==0 and b%k==0):
        break
    k-=1
print(k)
```

```
# fibanocci series
n=int(input("enter range: "))
a=0
b=1
print(a,end=" ")
print(b,end=" ")
for i in range(1,n-1):
    c=a+b
    print(c,end=" ")
    a=b
    b=c
```

```
# palindrome
a=int(input("enter a number: "))
b=a
rev=0
while(a!=0):
    r=a%10
    rev=rev*10+r
    a=a//10
print(rev)
if(rev==b):
    print("it is a palindrome")
else:
    print("it is not a palindome")
```

```
# strong numbner
n=int(input("enter a number: "))
t=n
sum=0
while(n !=0):
    r=n%10
    f=1
    while(r !=1):
        f=f*r
        r=r-1
    sum=sum+f
```

```
n=n//10
if(sum==t):
    print("it is a strong number")
else:
    print("it is not a strong number")
```

```
# perfect number
n=int(input("enter a number: "))
s=0
for i in range(1,(n//2+1)):
    if n%i == 0:
        s+=i

if(s == n):
    print("perfect number")
else:
    print("not a perfect number")
```

```
#compound interest
p=int(input(" enter Amount :"))
r=int(input(" enter rate :"))
t=int(input(" enter time :"))
C=p*pow(1+r/100,t)-p
print("compound intrest :",C)
```

```
#Accepting 5 different subject marks from user and displaying the grade of the student
sub1 =float(input("sub 1: "))
sub2 =float(input("sub 2: "))
sub3=float(input("sub 3: "))
sub4=float(input("sub 4: "))
sub5=float(input("sub 5: "))
avg=(sub1+sub2+sub3+sub4+sub5)/5
if(avg>=90):
    print("O grade")
elif(avg>=80):
    print("A+ grade")
elif(avg>=70):
    print("A GRADE")
elif(avg>=60):
    print("B GRADE")
elif(avg>=50):
    print("C GRADE")
else:
    print("fail")
```

