```
## Accepting 5 different subject marks from user and displaying the grade of the student
a=int(input("enter english marks"))
b=int(input("enter maths marks"))
c=int(input("enter cse marks"))
d=int(input("enter beee marks"))
e=int(input("enter chemistry marks"))
x=(a+b+c+d+e)/5
if x>=90:
  print("A GRADE")
elif x>=80:
  print("B GRADE")
elif x>=70:
      print("C GRADE")
elif x>=60:
      print("D GRADE")
elif x>=50:
      print("E GRADE")
else:
      print("FAIL")
```

```
     enter english marks10
     enter maths marks20
     enter cse marks3
     enter beee marks4
     enter chemistry marks4
     FAIL
```

```
##Take 2 numbers as user input and add, multiply, divide, subtract, remainder and print th
a=int(input("enter a"))
b=int(input("enter b"))
c=a+b
d=a-b
e=a*b
f=a/b
print(c)
print(d)
print(e)
print(f)
```

```
     enter a10
     enter b10
     20
     0
     100
     1.0
```

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

```
c=b*60
print("time in sec:",c)
```

```
enter time in hours24
time in min are: 1440
time in sec: 86400
```

```
##Usage of mathematical functions in python like math.ceil, floor, fabs, fmod, trunc,pow,
import math
print(math.ceil(1.2))
print(math.floor(1.2))
print(math.fabs(1.2))
print(math.fmod(100,101))
```

```
2
1
1.2
100.0
```

```
## Compute compound interest using loop for a certain principal and interest amount
n=int(input("Enter the principle amount:"))
rate=int(input("Enter the rate:"))
years=int(input("Enter the number of years:"))
for i in range(years):
 n=n+((n*rate)/100)
print(n)
```

```
Enter the principle amount:122222222
Enter the rate:3
Enter the number of years:10
164256446.06563345
```

```
## Compute GCD of two given
a=int(input("enter a number"))
b=int(input("enter a number"))
k=a if a<b else b
while True:
 if a%k==0 and b%k==0:
  break
 k -=1
print(k)
```

```
enter a number12
enter a number26
2
```

```
#Compute the factorial of a given number.
n=int(input("enter a number "))
x=1
for i in range(1,n+1):
 x=x*i
print(x)
```

```
enter a number 20
2432902008176640000
```

```
## Printing all even numbers, odd numbers, count of even numbers,count of odd numbers with
n=int(input("enter range "))
c=0
for i in range(1,n+1):
 if i%2==0:
   c+=1
 print(i)
print("even count is ",c)
d=0
for i in range(1,n+1):
 if i%2!=0:
   d+=1
 print(i)
print("odd count is ",d)
```

```
enter range 26
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
even count is  13
1
2
3
4
5
6
7
8
9
10
11
```

```
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
odd count is  13
```

```
## Check whether the given input is perfect number or not
n = int(input("Enter any number: "))
sum1 = 0
for i in range(1, n):
 if(n % i == 0):
   sum1 = sum1 + i
if (sum1 == n):
 print("Perfect number")
else:
 print("Perfect number")
```

```
Enter any number: 6
Perfect number!
```

```
## Usage of mathematical functions in python like math.ceil, floor,fabs, fmod, trunc, pow,
import math
my_int=4.5467
print(math.ceil(my_int))
print(math.floor(my_int))
print(math.fabs(my_int))
print(math.fmod(4.5467, 5.2165))
print(math.trunc(my_int))
print(math.pow(4.5467, 5.2165))
print(math.sqrt(my_int))
```

```
5
4
4.5467
4.5467
4
2696.9490793468362
2.132299228532431
```

```
## using .format
PUSHPA=150
RRR=567
KGF=600
```

```
bucketlist = "KGF FOR {2},RRR FOR {1} AND PUSHPA {0} FOR dollars."
print(bucketlist.format(PUSHPA,RRR,KGF))
```

```
     KGF FOR 600,RRR FOR 567 AND PUSHPA 150 FOR dollars.
```

```
## Building a mathematical calculator that can perform operations according to user input.
def add(x, y):
 return x + y
def subtract(x, y):
 return x - y
def multiply(x, y):
 return x * y
def divide(x, y):
 return x / y
print("Select operation.")
print("1.Add")
print("2.Subtract")
print("3.Multiply")
print("4.Divide")
while True:
 choice = input("Enter choice(1/2/3/4): ")
 if choice in ('1', '2', '3', '4'):
   num1 = float(input("Enter first number: "))
 num2 = float(input("Enter second number: "))
 if choice == '1':
      print(num1, "+", num2, "=", add(num1, num2))
 elif choice == '2':
       print(num1, "-", num2, "=", subtract(num1, num2))
 elif choice == '3':
           print(num1, "*", num2, "=", multiply(num1, num2))
 elif choice == '4':
         print(num1, "/", num2, "=", divide(num1, num2))
```

```
    Select operation.
    1.Add
    2.Subtract
    3.Multiply
    4.Divide
    Enter choice(1/2/3/4): 1
    Enter first number: 2
    Enter second number: 2
    2.0 + 2.0 = 4.0
    Enter choice(1/2/3/4):
```

Executing (1m 17s) Cell › raw_input() › _input_request() › recv() › recv_multipart()