SET-2

A.

#1. Write a program in python to add two numbers and print the result.

a,b=input(),input()

sum=a+b

print(sum)

#2. Write a program in python to find the area of a triangle.

base=int(input())

height=int(input())

area=1/2\*(base\*height)

print(area)

#3. Write a program in python to find square root of a number.

import math

num=int(input())

sq\_root=math.sqrt(num)

print(sq\_root)

#4. Write a program in python to solve a quadratic equation.

import math

coeff\_a=int(input())

coeff\_b=int(input())

coeff\_c=int(input())

if coeff\_b\*\*2-(4\*coeff\_a\*coeff\_c):

root1=((-coeff\_b)-math.sqrt(coeff\_b\*\*2-(4\*coeff\_a\*coeff\_c)))/(2\*coeff\_a)

root2=((-coeff\_b)+math.sqrt(coeff\_b\*\*2-(4\*coeff\_a\*coeff\_c)))/(2\*coeff\_a)

print(‘roots’,root1,root2)

else:

print('No real roots')

#5. Write a program in python to convert Fahrenheit to Celsius.

f=int(input())

c=((f-32)\*5)/9

print(c)

#6.Write a program in python to find quotient and reminder after division.

dividend=int(input())

divisor=int(input())

q=dividend//divisor

r=dividend%divisor

print('Quotient is',q)

print('Reminder is',r)

#7. Write a program in python to swap two numbers using tuple assignment.

a=int(input())

b=int(input())

tup1=(a,b)

b,a=tup1

print('a=',a)

print('b=',b)

#8. Write a program in python to find the average of three marks.

a,b,c=input(),input(),input()

avg=(a+b+c)/3

print(avg)

#9. Write a program in python to calculate simple interest.

principal=int(input())

time=int(input())

interest=int(input())

si=(principal\*rate\*interest)/100

print(si)

#10. Write a program in python to calculate the net pay given basic pay, hra, da

and deductions.

basic=int(input())

hra=int(input())

da=int(input())

deduc=int(input())

net=basic+hra+da-deduc

print(net)

B.

#1.Given age determine whether a person is eligible to vote or not. (if else)

Age=int(input())

if Age>18:

print('Eligible to vote')

else:

print('Not eligible to vote')

#2. Check whether a number is odd or even. (if else)

num=int(input())

if num>=0:

if num%2==0:

print('even number')

else:

print('odd numer')

else:

pass

Write a program to find largest of two numbers.

#3. Write a program to find largest of two numbers. (if else)

a=input()

b=input()

if a>b:

print(a,'is largest')

else:

print(b,'is largest')

#4. Obtain a character convert lower case to uppercase and vice versa. (if else)

chr=input()

s=''

for i in chr:

if i.isupper():

s+=i.lower()

else:

s+=i.upper()

print(new)

#5. Find the input year is leap year or not. (if else)

year=int(input())

if year%100==0 and year%400==0:

print('Leap year')

else:

if year%4==0 and year%100!=0:

print('Leap year')

else:

print('Not a leap year')

#6. Read a number, check if it is positive, negative or zero. Increment the number if it is positive, decrement if it is negative. (elif statement)

inp=int(input())

if num>0:

num+=1

elif num<0:

num-=1

else:

pass

print(inp)

#7. Create a simple calculator. (elif statement)

num1,num2=int(input()),int(input())

operation=input()

ans=0

if operation=='+':

ans=num1+num2

elif operation=='-':

ans=num1-num2

elif operation=='\*':

ans=num1\*num2

elif operation=='/':

if num2!=0:

ans=num1/num2

else:

print('Cant divide by zero')

else:

print('operation not supported')

print(num1,operation,num2,ans)

#8. Estimate the Grade based on the marks obtained by a student. (elif statement)

marks=int(input())

grade=''

if marks=100:

grade='S'

elif marks>90 and marks<100:

grade='A'

elif marks>80 and marks<90:

grade='B'

elif marks>70 and marks<80:

grade='C'

elif marks>60 and marks<70:

grade='D'

elif marks>50 and marks<60:

grade='E'

else:

grade='F'

print(grade)

#9. Find the largest of 3 numbers. (elif statement)

a,b,c=input(),input(),input()

if a>b and a>c:

print(a)

elif b>a and b>c:

print(b)

else:

print(c)

#10. Obtain a character, check if it is lower case, uppercase or digit. (elif statement)

X=input()

if x.isupper():

print('uppercase')

elif x.islower():

print('lowercase')

elif x.isdigit():

print('digit')

C.

#4. Write a program in python to find whether a number is divisible by both 5 and 7 .

num=int(input())

if num%5==0 and num%7==0:

print('Divisible by both 5 and 7')

else:

print('Not Divisible by both 5 and 7')

#6. Write a program in python to input three sides of a triangle and check whether the triangle is equilateral, isosceles or scalene

a,b,c=input(),input(),input()

if a==b and b==c and c==a:

print('Equilateral triangle')

elif a!=b and a!=c and b!=c:

print('Scalene triangle')

elif a==b or b==c or c==a:

print('Isosceles triangle')

else:

print('None of the above')

#7. Write a program in python to input three sides of a triangle and check whether it is right angled one

a,b,c=input(),input(),input()

if (c\*\*2)==(a\*\*2)+(b\*\*2):

print('Right angled triangle')

else:

print('Not Right angled triangle')

#8. Read a number, check if it is positive, negative or zero. Increment the number if it is positive, decrement if it is negative.

num=int(input())

if num>0:

num+=1

elif num<0:

num-=1

else:

pass

print(num)

#13. Obtain a input from the user and display the corresponding data types (primitive and compound data type)

inp=input()

chr\_type=str(type(inp))

print(chr\_type[8:-2])

While loop

num=int(input())

power=int(input())

count=0

ans=1

while count<power:

ans\*=num

count+=1

print(ans)

#2. Write a program in python to print all the two digit numbers which are

either divisible by 3 or by 4.

x =10

while num>9 and num<100:

if x%3==0 or x%4==0:

print(x)

x+=1

#3. Write a program in python to print the sum of all the digits of a number.

x= int(input())

sums=0

while x>0:

a=x%10

x=x//10

sum+=a

print(sum)

#4. Perform the division operation and find the quotient and remainder values. (without using /, // % operators)

divisor=int(input())

dividend=int(input())

quo=0

while True:

if dividend>divisor:

dividend-=divisor

quo+=1

else:

print(dividend)

break

#5. Check whether the given number is palindrome or not

#6. Check whether the given number is Armstrong number or not

num=int(input())

pow=len(str(num))

copy=num

sum=0

while num>0:

a=num%10

sum+=a\*\*pow

num=num//10

if copy==sum:

print('Armstrong number')

else:

print('Not Armstrong number')

#7. Compute the GCD of two numbers.(Euclidean Method and using

common factors)

a=int(input())

b=int(input())

while b:

a,b=b,a%b

print(num1)

#8. Take integer inputs from user until he/she presses q (Ask to press q to

quit after every integer input ). Print average and product of all numbers.

sum=0

prod=1

while True:

print('press \'q\' to quit')

inp=input()

if inp=='q':

break

else:

sum+=int(inp)

prod\*=int(inp)

avg=sum/len(str(sum))

print(avg)

print(prod)

#9. Find the square root of a number. (Newton’s method)

import math

a,b=input(),input()

x=a

while True:

root=0.5\*(x+(a/x))

if abs(root-x)<b:

break

else:

x=root

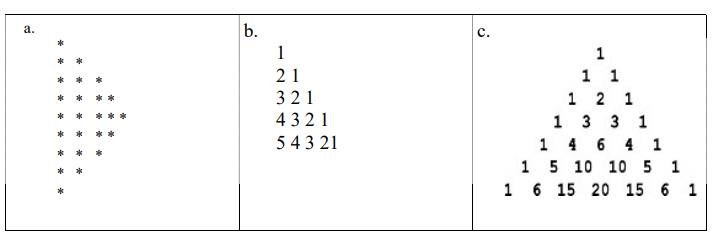
sq\_root=round(root,len(str(b))-2)

print(sq\_root)

For loop

#1. Write a Python program to construct the following pattern, using a nested

for loop.



**a.**

for i in range(1,6):

for j in range(i):

print('\*',end=' ')

print()

for i in range(4,0,-1):

for j in range(i):

print('\*',end=' ')

print()

**b.**

for i in range(1,6):

num=i

for j in range(i):

print(num-j,end=' ')

print()

**c.**

for i in range(1,8):

for j in range(7-i):

print(' ',end='')

x=1

for j in range(1,i+1):

print(x,end=' ')

x=x\*(i-j)//j

print()

#2. Write a Python program that accepts a word from the user and reverse it.

x=input()

reverse=''

for i in range(len(x),0,-1):

reverse+=x[i-1]

print(reverse)

#3. Write a Python program to count the number of even and odd numbers from

a series of numbers.

numbers=(1,2,3,4,5,6,7,8,9)

evencount=0

oddcount=0

for i in numbers:

if i%2==0:

evencount+=1

else:

oddcount+=1

print(evencount)

print(oddcount)

#4. Write a Python program that prints each item and its corresponding type

from the following list.

Sample List : datalist = [1452, 11.23, 1+2j, True, 'w3resource', (0, -1), [5, 12],

{"class":'V', "section":'A'}]

datalist=[1452,11.23,1+2j,True,'w3resource',(0,-1),[5,12],{'class':'V','section':'A'}]

for i in datalist:

print(type(i))

#5. Write a Python program that prints all the numbers from 0 to 6 except 3.Note : Use 'continue' statement.

for i in range(7):

if i==3 or i==6:

continue

else:

print(i)

#6. Write a Python program which iterates the integers from 1 to 50. For

multiples of three print "Fizz" instead of the number and for the multiples of

five print "Buzz". For numbers which are multiples of both three and five

print "FizzBuzz".

for i in range (1,51):

if i%3==0 and i%5!=0:

print('Fizz')

elif i83!=0 and i85==0:

print('Buzz')

elif i%3==0 and i%5==0:

print('FizzBuzz')

#7. Write a Python program to find numbers between 100 and 400 (both

included) where each digit of a number is an even number. The numbers

obtained should be printed in a comma-separated sequence.

for i in range(100,401):

count=0

num=i

while num>0:

rem=num%10

num=num//10

if rem%2==0:

count+=1

if count==3:

print(i)

#8. Write a Python program to create the multiplication table (from 1 to 10) of

a number.

Inp= int(input())

for i in range (1,inp+1):

print (inp, 'x', i, '=', inp\*i)

#9. Find the sum of series:

a. 1 + 1/2 + 1/3 + ….. + 1/N

n=int(input())

sum=0

for i in range (1,n+1):

sum+=1/(i)

print (sum)

b. 1 + x^2/2 + x^3/3 + … x^n/n

n=int(input())

x=int(input())

sum=0

temp=0

for i in range (1,n+1):

sum+=(x\*\*temp)/(i)

temp=i

print (sum)

#10. Classify the given number is prime or composite number.

inp=int(input())

count=0

for i in range(2,inp):

if inp%i==0:

count=1

if count=1:

print('Composite number')

else:

print('Prime number')