**1**.

a = int(input("enter the value for a : "))

b = int(input("enter the value for b : "))

c = int(input("enter the value for c : "))

z =-b/2\*a + ((b\*2)-4\*a\*c)\*.5/2\*a

p =-b/2\*a - ((b\*2)-4\*a\*c)\*.5/2\*a

q = f"the roots are {z} and {p}."

if a==0:

print("error! value of a cannot be 0")

elif (b\*\*2)-4\*a\*c < 0:

print("roots cant be complex")

else:

print(q)

**2.**

a = input("Enter a string")

c = a.split(" ")

y=[]

for i in c:

if y.count(i)==0:

y.append(i)

print(i.title(),"-", a.count(i))

**3.**

import re

b= input("Enter any text : ")

a = b.lower()

x = re.findall("[a-z]",a)

g = re.findall("\d",a)

h =(len(g))

j =(len(x))

letter = f"No of letters are {j}"

number = f"No of numbers are {h}"

print(letter)

print(number)

**4.**

import re

a = input(("Enter the password : "))

b = a.isalpha()

c = a.isdigit()

d = a.islower()

g = re.findall("&" or "%" or "\*" or "$",a)

f = len(a)

if b == True :

print("The password should contain at least one number[0 to 9].")

elif c == True :

print("The password should contain at least one word[a to z].")

elif d == True :

print("It should contain at least 1 capital letter.[A to Z]")

elif f<= 5 :

print("It should contain minimum 6 characters")

elif f>= 13:

print("It should not contain more than 12 characters.")

elif g == []:

print("it should only contain the special characters $,%,\*,&")

else:

print("Valid password")

**5.**

import re

a = input("Enter any string : ")

b = input("Target Word")

x=a.split(" ")

pos=[]

j = 0

for i in a:

if i==b:

pos.append(j)

j=j+1

print(pos)