BASIC VERSION

a=1

b=4

c=5

d=(b\*b)-(4\*a\*c)

if(d>0):

print("roots are real")

x1=(((-b)+sqrt(d))/(2\*a))

x2=(((-b)-sqrt(d))/(2\*a))

print("the roots are: %f and %f" %(x1,x2))

elif(d<0):

print("roots are imaginary")

x1=x2=(-b/(2\*a))

j=(sqrt(-d))/(2\*a)

print("x1= %.2f + %.2f i and x2= %.2f - %.2f i"%(x1,j,x2,j))

roots are imaginary

VERSION 1

a=1

b=2

c=1

d=(b\*b)-(4\*a\*c)

if(d>0):

print("roots are real")

x1=(((-b)+sqrt(d))/(2\*a))

x2=(((-b)-sqrt(d))/(2\*a))

print("the roots are: %f and %f" %(x1,x2))

elif(d<0):

print("roots are imaginary")

x1=x2=(-b/(2\*a))

j=(sqrt(-d))/(2\*a)

print("x1= %.2f + %.2f i and x2= %.2f - %.2f i"%(x1,j,x2,j))

else:

print("roots are equal")

x1=x2=(-b/(2\*a))

print("x1= %.2f and x2= %.2f "%(x1,x2))

VERSION 2

a=0

b=2

c=1

d=(b\*b)-(4\*a\*c)

if(a==0):

print("divide by zero error")

else:

if(d>0):

print("roots are real")

x1=(((-b)+sqrt(d))/(2\*a))

x2=(((-b)-sqrt(d))/(2\*a))

print("the roots are: %f and %f" %(x1,x2))

elif(d<0):

print("roots are imaginary")

x1=x2=(-b/(2\*a))

j=(sqrt(-d))/(2\*a)

print("x1= %.2f + %.2f i and x2= %.2f - %.2f i"%(x1,j,x2,j))

else:

print("roots are equal")

x1=x2=(-b/(2\*a))

print("x1= %.2f and x2= %.2f "%(x1,x2))

VERSION 3

print("enter the values of a,b,c")

a=float(input())

b=float(input())

c=float(input())

d=(b\*b)-(4\*a\*c)

if(a==0):

print("divide by zero error")

else:

if(d>0):

print("roots are real")

x1=(((-b)+sqrt(d))/(2\*a))

x2=(((-b)-sqrt(d))/(2\*a))

print("the roots are: %f and %f" %(x1,x2))

elif(d<0):

print("roots are imaginary")

x1=x2=(-b/(2\*a))

j=(sqrt(-d))/(2\*a)

print("x1= %.2f + %.2f i and x2= %.2f - %.2f i"%(x1,j,x2,j))

else:

print("roots are equal")

x1=x2=(-b/(2\*a))

print("x1= %.2f and x2= %.2f "%(x1,x2))