QUADRATIC EQUATION:

#include<stdio.h>

#include<math.h>

int main()

{

float a,b,c,desc,r1,r2,realpart,imgpart;

printf("Enter the coefficients of a, b and c :");

scanf("%f%f%f",&a,&b,&c);

if(a==0) { printf("Coefficient of a cannot be zero....\n");

printf("Please try again....\n");

return 1;

}

desc=(b\*b)-(4.0\*a\*c);

if(desc==0)

{

printf("The roots are real and equal\n");

r1=r2=(-b)/(2.0\*a);

printf("The two roots are r1=r2=%f\n",r1);

}

else if(desc>0)

{

printf("The roots are real and distinct\n");

r1=(-b+sqrt(desc))/(2.0\*a);

r2=(-b-sqrt(desc))/(2.0\*a);

printf("The roots are r1=%f and r2=%f\n",r1,r2);

}

else

{

printf("The roots are imaginary\n");

realpart=(-b)/(2.0\*a);

imgpart=sqrt(-desc)/(2.0\*a);

printf("The roots are r1=%f + i %f\n",realpart,imgpart);

printf("r2=%f - i %f\n",realpart,imgpart);

}

return 0;

}