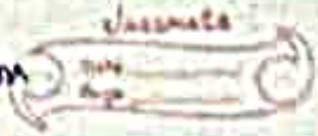
# Roots of Quadratic Equation



```
#include<stdio.h>
#include<math.h>
int main()
{
    float a,b,c;
    float root1,root2,imaginary,discriminant;

    printf("\n Please Enter values of a,b,c of
            Quadratic Equation: ");
    scanf("%f %f %f",&a,&b,&c);

    discriminant = (b*b-(4*a*c);

    if (discriminant >0)
    {
        root1 = (-b+sqrt(discriminant)/(2*a));
        root2=(-b-sqrt(discriminant)/(2*a));
        printf("\n Two Distinct Real roots Exists:
                root1 =%.2f and root2=%.2f",root1,root2);
    }
    else if(discriminant ==0)
    {
        root1=root2 = -b/(2*a);
        printf("\n Two equal and Real Roots exists:
                root1=%.2f and root2=%.2f",root1,root2);
    }
    else if(discriminant<0)
    {
        root1=root2=-b/(2*a);
        imaginary =sqrt(-discriminant)/(2*a);
        printf("\n Two Distinct Complex Roots exists:
                root1 =%.2f and root2=%.2f-%.2f",
                root1,imaginary,root2,imaginary);
```

```
}
return 0;
}
```