```c
#include<stdio.h>
#include<math.h>
float u(float x,float y);
float ux(float x,float y);
float v(float x,float y);
float vx(float x,float y);
main()
{
 float x,y,h,k,error=1.e-6;
 printf("Enter the initial approximation of real part\n");
 scanf("%f",&x);
 printf("Enter the initial approximation of imaginary part\n");
 scanf("%f",&y);
 h=-(u(x,y)*ux(x,y)+v(x,y)*vx(x,y))/(ux(x,y)*ux(x,y)+vx(x,y)*vx(x,y));
 k=(u(x,y)*vx(x,y)-v(x,y)*ux(x,y))/(ux(x,y)*ux(x,y)+vx(x,y)*vx(x,y));
 while(fabs(h)>error||fabs(k)>error)
 {
 x=x+h;
 y=y+k;
 h=-(u(x,y)*ux(x,y)+v(x,y)*vx(x,y))/(ux(x,y)*ux(x,y)+vx(x,y)*vx(x,y));
 k=(u(x,y)*vx(x,y)-v(x,y)*ux(x,y))/(ux(x,y)*ux(x,y)+vx(x,y)*vx(x,y));
 }
 printf("\nReal part of the root = %7.5f\nImaginary part of the root = %7.5f",x,y);
 printf("\nCorrect upto five decimal places");
}
float u(float x,float y)
{
 float z;
 z=3*pow(x,3)-9*x*pow(y,2)-7*pow(x,2)+7*pow(y,2)+6*x-2;
 return (z);
}
float v(float x,float y)
{
 float z;
 z=9*pow(x,2)*y-3*pow(y,3)-14*x*y+6*y;
 return (z);
}
float ux(float x,float y)
{
 float z;
 z=9*pow(x,2)-9*pow(y,2)-14*x+6;
 return (z);
}
float vx(float x,float y)
{
 float z;
 z=18*x*y-14*y;
 return (z);
}
//*OUTPUT*//
Enter the initial approximation of real part
0.5
Enter the initial approximation of imaginary part
0.5
Real part of the root = 0.66667
Imaginary part of the root = 0.47140
Correct upto five decimal places
```