

Scilab on cloud

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Scilab code:

```

1 clc;clear
2 deff('y=f(x)','y=x^3-2*x-5');
3 x1=2,x2=3// initial values
4 n=1; c=0;
5 printf('successive iterations \tx1 \tx2\tx3\tx f(x3)\n')
6 while n==1
7     x3=(x1*f(x2)-x2*f(x1))/(f(x2)-f(x1));
8     printf(' \t%f\t%f\t%f\t%f\n',x1,x2,x3,f(x3));
9     if f(x3)*f(x1)>0
10        x2=x3;
11    else
12        x1=x3;
13    end
14    if abs(f(x3))<0.0001 then
15        break;
16    end
17    c=c+1;
18    end
19    printf('the root of the equation after %i iteration is: %f',c,x3 )

```

Result:

```

x1 =
2.
x2 =
3.
successive iterations  x1  x2  x3  f(x3)
2.000000  3.000000  2.058824  -0.390800
2.000000  2.058824  2.096559  0.022428
2.096559  2.058824  2.094511  -0.000457
2.094511  2.058824  2.094552  0.000009
the root of the equation after 3 iteration is: 2.094552

```

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Maths practical secant method(13-12-2022)