Example

Q) Find the real root of the equation x^3-x-1=0 by secant method up to 4 decimal places?

**F(x)=x^3-x-1**

**To find x0 and x1**

**F(0)=-1 , F(1)=-1 , F(2)= 5**

**Root[1,2]**

**F(1.5)=0.875 , F(1.4)=0.343 , F(1.3)= -0.103**

**Changing x0= 1.3 and x1= 1.4**

**F(x0)= -0.103 and F(x1)= 1.323042**

**(First case) x2=x0\*F(x1)-x1\*F(x0) =1.323042**

**F(x1)-F(x0)**

**F(x2)= -0.007136**

(Second case) **x3=x1\*F(x2)-x2\*F(x1) =1.323605**

**F(x2)-F(x1)**

**F(x2)= -0.000481**

(Third case) **x4=x2\*F(x3)-x3\*F(x2) =1.324717**

**F(x3)-F(x2)**

**F(x2)= -0.000004**

**Hence the correct answer(root) up to 4 decimal places is x=1.3247**