```
In[18]:=   f[x_] := 27 x^4 + 162 x^3 - 180 x^2 + 62 x - 7;

In[19]:=   Subscript [x, 0] = 0;
           ϵ = 0.000005 ;

In[21]:=   Nmax = 10 ;

In[22]:=   For[i = 1, i ≤ Nmax , i++ ,
              Subscript [x, i] = N[Subscript [x, i - 1] - (f[Subscript [x, i - 1]]/ f '[Subscript [x, i - 1]])];
           If[Abs[Subscript [x, i] - Subscript [x, i - 1]] < ϵ, Return [Subscript [x, i]]];
           Print [i, "th iteration  value  is ", N[Subscript [x, i]]];
           Print ["Estimated  error  is ", Abs[Subscript [x, i] - Subscript [x, i - 1]]];
           Plot[f[x], {x, 0, 3}]
           DiscretePlot [Subscript [x, i], {i, 1, 10}]
           DiscretePlot [Abs[Subscript [x, i] - Subscript [x, i - 1]]]
```

1th iteration  value  is 0.112903

Estimated  error  is 0.112903

2th iteration  value  is 0.187147

Estimated  error  is 0.0742436

3th iteration  value  is 0.236208

Estimated  error  is 0.0490615

4th iteration  value  is 0.268729

Estimated  error  is 0.0325205

5th iteration  value  is 0.290328

Estimated  error  is 0.0215988

6th iteration  value  is 0.304691

Estimated  error  is 0.0143635

7th iteration  value  is 0.314251

Estimated  error  is 0.0095599

8th iteration  value  is 0.320617

Estimated  error  is 0.00636631

9th iteration  value  is 0.324858

Estimated  error  is 0.00424112

10th iteration  value  is 0.327685

Estimated  error  is 0.00282605

Out[23]=



Out[24]=
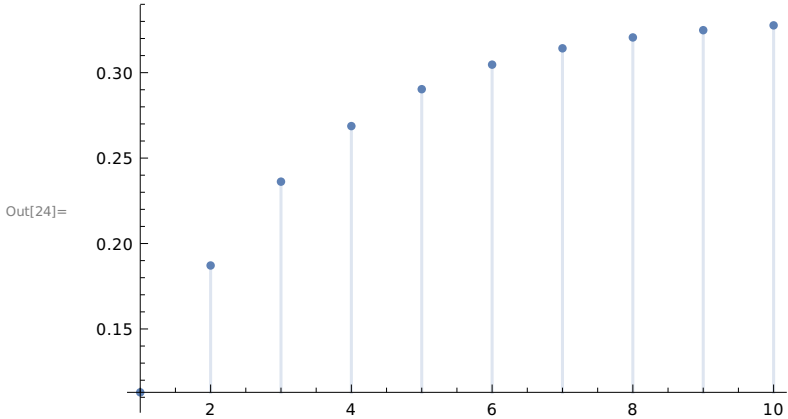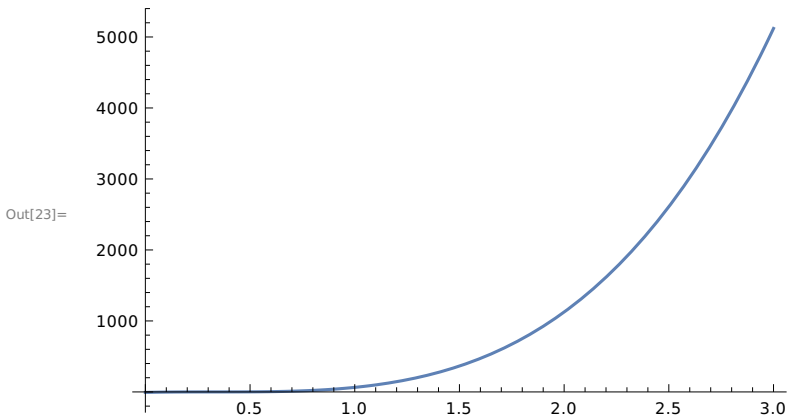


⋯ **DiscretePlot** : DiscretePlot called with 1 argument ; 2 arguments are expected .

Out[25]= DiscretePlot $[\text{Abs}[x_i - x_{i-1}]]$