```
In[ ]:= SetDirectory@NotebookDirectory[];
        设置目录      当前笔记本的目录
```

Parameters

```
In[ ]:= nMax = 30;
        χ = 1. / 8.;
```

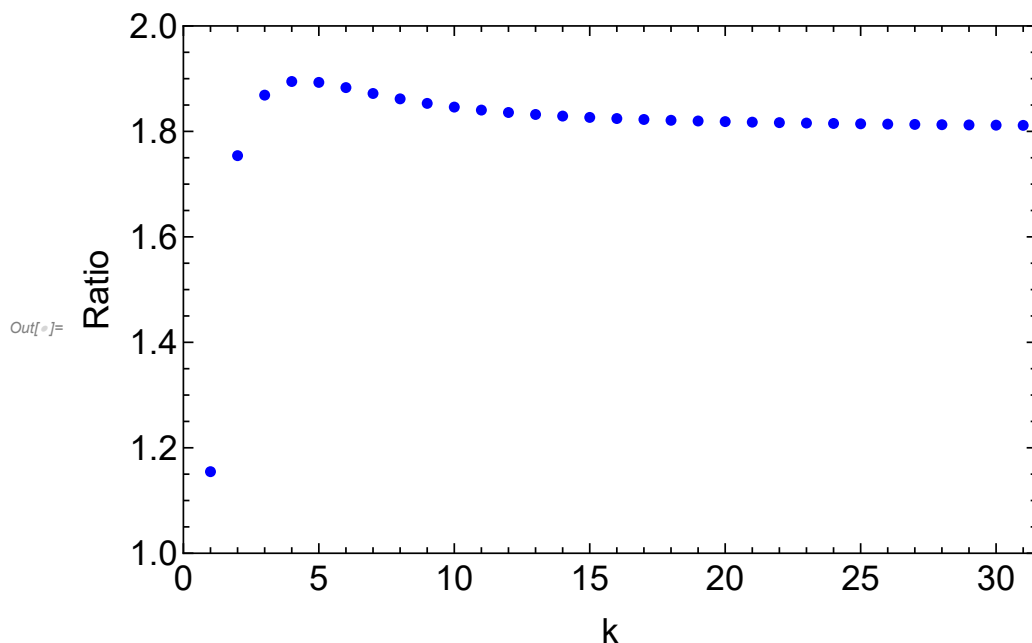# Cost upper bound

```
In[ ]:= nList = {};
        cList = {};

        Do[
        Do循环

          AppendTo[nList, n];
          附加

          If[n == 0, factor = 1., factor = (n/Exp[1.])^(-n/2)];
          如果

          cost = NIntegrate[
                 数值积分

              2 (2^(-n/2) Abs[HermiteH[n, u/√2]]) 1/√(2 π) Exp[-(1/2 - χ) u^2]) * factor, {u, 0., ∞}];
                                埃尔米特多项式              指数形式

          AppendTo[cList, cost]
          附加

        ], {n, 0, nMax}]
```

```
In[ ]:= PR = {{0, 31.5}, {1, 2}};
      ListPlot[Transpose[{nList + 1, cList}], PlotRange → PR, PlotStyle → {Blue},
       Frame → True, FrameStyle → Directive[Black, Thickness[0.002]],
       FrameTicksStyle → Directive[Black, Thickness[0.002]], FrameLabel → {"k", "Ratio"},
       LabelStyle → Directive[Black, FontSize → 18, FontFamily → "Arial"], ImageSize → 500]
      cList
```



```
Out[ ]= {1.1547, 1.75399, 1.86875, 1.89461, 1.89291, 1.88305, 1.87188,
       1.86169, 1.8531, 1.84608, 1.8404, 1.83582, 1.83209, 1.82904, 1.82651,
       1.82439, 1.82259, 1.82105, 1.81971, 1.81854, 1.81751, 1.8166, 1.81578,
       1.81504, 1.81437, 1.81376, 1.81321, 1.8127, 1.81223, 1.81179, 1.81139}
```