1.已知ln(2.0)=0.6931;ln(2.2)=0.7885,ln(2.3)=0.8329,

试用线性插值和抛物插值计算.ln2.1的值并估计误差

2.已知x=0,2,3,5对应的函数值分别为y=1,3,2,5.试求三次多项式的插值

3.分别求满足习题1和习题2 中插值条件的Newton插值

4.给出函数f(x)的数表如下,求四次Newton插值多项式,并由此计算f(0.596)的值

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 0.40 | 0.55 | 0.65 | 0.80 | 0.90 | 1.05 |
|  | 0.41075 | 0.57815 | 0.69675 | 0.88811 | 1.02652 | 1.25382 |

5.已知函数y=sinx的数表如下,分别用前插和后插公式计算sin0.57891的值

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 0.4 | 0.5 | 0.6 | 0.7 |
|  | 0.38942 | 0.47943 | 0.56464 | 0.64422 |