1>
t(k)
2.000000000000000e-01
4.000000000000000e-01
6.000000000000001e-01
8.000000000000000e-01
1.000000000000000e+00
1.200000000000000e+00
1.400000000000000e+00
1.600000000000000e+00
1.800000000000000e+00
2.000000000000000e+00

Approximate value :-
5.000000000000000e-01
8.000000000000000e-01
1.152000000000000e+00
1.550400000000000e+00
1.988480000000000e+00
2.458176000000000e+00
2.949811200000001e+00
3.451773440000001e+00
3.950128128000001e+00
4.428153753600001e+00
4.865784504320001e+00

Actual Values:-
5.000000000000000e-01
5.000000000000000e-01
8.292986209199150e-01
1.214087651179365e+00
1.648940599804746e+00
2.127229535753766e+00
2.640859085770477e+00
3.179941538631727e+00
3.732400016577664e+00
4.283483787802443e+00
4.815176267793525e+00

Errors:-
0
-3.000000000000000e-01
-3.227013790800851e-01
-3.363123488206357e-01
-3.395394001952543e-01
-3.309464642462339e-01
-3.089521142295233e-01
-2.718319013682740e-01
-2.177281114223368e-01
-1.446699657975579e-01
-5.060823652647617e-02

2>a>

t(k)	Approximate Values
0	0
5.000000000000000e-01	0
1.000000000000000e+00	4.121803176750320e-01

b>

t(k)	Approximate Values
1.000000000000000e+00	2.000000000000000e+00
1.250000000000000e+00	2.750000000000000e+00
1.500000000000000e+00	3.550000000000000e+00
1.750000000000000e+00	4.391666666666667e+00
2.000000000000000e+00	5.269047619047619e+00
2.250000000000000e+00	6.177678571428571e+00
2.500000000000000e+00	7.114087301587301e+00
2.750000000000000e+00	8.075496031746031e+00
3.000000000000000e+00	9.059632034632033e+00

c>

t(k)	Approximate Values
0	2.500000000000000e-01
1.000000000000000e-01	1.250000000000000e-01
2.000000000000000e-01	8.749999999999999e-02
3.000000000000000e-01	1.037500000000000e-01
4.000000000000000e-01	1.568750000000000e-01
5.000000000000000e-01	2.384375000000000e-01
6.000000000000001e-01	3.442187500000000e-01
7.000000000000001e-01	4.721093750000001e-01
8.000000000000000e-01	6.210546875000000e-01
9.000000000000000e-01	7.905273437500001e-01
1.000000000000000e+00	9.802636718750002e-01

3>

with h=0.2   y(5)= 1.003962166440690e+02

with h=0.1   y(5)= 1.365515722500323e+04