

Aufgabe 2

h-Extrapolation

h	D1f(1,h)	Di1	Di2	Di3
0.1	2.858841955			
0.05	2.787385792	2.715929629		
0.025	2.752545284	2.717704776	2.718296492	
0.0125	2.7353421	2.718138916	2.718283629	2.718281792
	Eik	Eik	Eik	Eik
	0.140560126			
	0.069103964	0.002352199		
	0.034263456	0.000577052	1.46637E-05	
	0.017060272	0.000142912	1.80101E-06	3.65211E-08

h2-Extrapolation

h	D2f(1,h)	Di1	Di2	Di3
0.1	2.722814564			
0.05	2.719414587	2.718281262		
0.025	2.718564992	2.718281793	2.718281828	
0.0125	2.718352618	2.718281826	2.718281828	2.718281828
	Eik	Eik	Eik	Eik
	0.004532735			
	0.001132759	5.66477E-07		
	0.000283163	3.53969E-08	8.42881E-12	
	7.07891E-05	2.21221E-09	1.04805E-13	2.70894E-14

Der Fehler wird immer kleiner.