

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
0,00	1,00000	100	1,00100	100	1,00200	100	1,00300	101	1,00401	100
0,01	1,01005	101	1,01106	101	1,01207	101	1,01308	102	1,01410	101
0,02	1,02020	102	1,02122	102	1,02224	103	1,02327	102	1,02429	103
0,03	1,03045	104	1,03149	103	1,03252	103	1,03355	103	1,03458	104
0,04	1,04081	104	1,04185	104	1,04289	105	1,04394	104	1,04498	105
0,05	1,05127	105	1,05232	106	1,05338	105	1,05443	105	1,05548	106
0,06	1,06184	106	1,06290	106	1,06396	107	1,06503	106	1,06609	107
0,07	1,07251	107	1,07358	108	1,07466	107	1,07573	108	1,07681	107
0,08	1,08329	108	1,08437	109	1,08546	108	1,08654	109	1,08763	109
0,09	1,09417	110	1,09527	109	1,09636	110	1,09746	110	1,09856	110
0,10	1,10517	111	1,10628	110	1,10738	111	1,10849	111	1,10960	111
0,11	1,11628	111	1,11739	112	1,11851	112	1,11963	112	1,12075	112
0,12	1,12750	112	1,12862	113	1,12975	113	1,13088	114	1,13202	113
0,13	1,13883	114	1,13997	114	1,14111	114	1,14225	114	1,14339	115
0,14	1,15027	115	1,15142	116	1,15258	115	1,15373	115	1,15488	116
0,15	1,16183	117	1,16300	116	1,16416	116	1,16532	117	1,16649	117
0,16	1,17351	117	1,17468	118	1,17586	118	1,17704	117	1,17821	118
0,17	1,18530	119	1,18649	119	1,18768	119	1,18887	119	1,19006	119
0,18	1,19722	120	1,19842	119	1,19961	120	1,20081	121	1,20202	120
0,19	1,20925	121	1,21046	121	1,21167	121	1,21288	122	1,21410	121
0,20	1,22140	122	1,22262	123	1,22385	122	1,22507	123	1,22630	123
0,21	1,23368	123	1,23491	124	1,23615	123	1,23738	124	1,23862	124
0,22	1,24608	124	1,24732	125	1,24857	125	1,24982	125	1,25107	125
0,23	1,25860	126	1,25986	126	1,26112	126	1,26238	126	1,26364	127
0,24	1,27125	127	1,27252	127	1,27379	128	1,27507	127	1,27634	128
0,25	1,28403	128	1,28531	129	1,28660	128	1,28788	129	1,28917	129
0,26	1,29693	130	1,29823	130	1,29953	130	1,30083	130	1,30213	130
0,27	1,30996	132	1,31128	131	1,31259	131	1,31390	131	1,31521	132
0,28	1,32313	132	1,32445	133	1,32578	133	1,32711	132	1,32843	133
0,29	1,33643	133	1,33776	134	1,33910	134	1,34044	134	1,34178	135
0,30	1,34986	135	1,35121	135	1,35256	135	1,35391	136	1,35527	136
0,31	1,36343	136	1,36479	136	1,36615	137	1,36752	137	1,36889	137
0,32	1,37713	138	1,37851	137	1,37988	139	1,38127	138	1,38265	138
0,33	1,39097	139	1,39236	139	1,39375	140	1,39515	139	1,39654	140
0,34	1,40495	140	1,40635	141	1,40776	141	1,40917	141	1,41058	141
0,35	1,41907	142	1,42049	142	1,42191	142	1,42333	143	1,42476	142
0,36	1,43333	143	1,43476	144	1,43620	144	1,43764	143	1,43907	144
0,37	1,44773	145	1,44918	145	1,45063	145	1,45208	146	1,45354	145
0,38	1,46228	147	1,46375	146	1,46521	147	1,46668	147	1,46815	146
0,39	1,47698	148	1,47846	148	1,47994	148	1,48142	148	1,48290	148
0,40	1,49182	150	1,49332	149	1,49481	150	1,49631	149	1,49780	150
0,41	1,50682	151	1,50833	150	1,50983	152	1,51135	151	1,51286	151
0,42	1,52196	152	1,52348	153	1,52501	152	1,52653	153	1,52806	153
0,43	1,53726	154	1,53880	154	1,54034	154	1,54188	154	1,54342	154
0,44	1,55271	155	1,55426	156	1,55582	155	1,55737	156	1,55893	156
0,45	1,56831	157	1,56988	157	1,57145	157	1,57302	158	1,57460	157
0,46	1,58407	159	1,58566	159	1,58725	158	1,58883	159	1,59042	159
0,47	1,59999	160	1,60159	161	1,60320	160	1,60480	161	1,60641	160
0,48	1,61607	162	1,61769	162	1,61931	162	1,62093	162	1,62255	163
0,49	1,63232	163	1,63395	163	1,63558	164	1,63722	164	1,63886	164

Błąd przybliżeń podanych na str. 138 i 139 jest nie większy niż 0,000005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,00000521 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
1,00501	101	1,00602	100	1,00702	101	1,00803	101	1,00904	101	0,00
1,01511	102	1,01613	102	1,01715	101	1,01816	102	1,01918	102	0,01
1,02532	102	1,02634	103	1,02737	103	1,02840	102	1,02942	103	0,02
1,03562	104	1,03666	103	1,03769	104	1,03873	104	1,03977	104	0,03
1,04603	104	1,04707	105	1,04812	105	1,04917	105	1,05022	105	0,04
1,05654	106	1,05760	106	1,05866	105	1,05971	107	1,06078	106	0,05
1,06716	107	1,06823	107	1,06930	107	1,07037	107	1,07144	107	0,06
1,07788	108	1,07896	108	1,08004	108	1,08112	108	1,08220	109	0,07
1,08872	109	1,08981	109	1,09090	109	1,09199	109	1,09308	109	0,08
1,09966	110	1,10076	110	1,10186	110	1,10296	111	1,10407	110	0,09
1,11071	111	1,11182	111	1,11293	112	1,11405	111	1,11516	112	0,10
1,12187	113	1,12300	112	1,12412	112	1,12524	113	1,12637	113	0,11
1,13315	113	1,13428	114	1,13542	113	1,13655	114	1,13769	114	0,12
1,14454	114	1,14568	115	1,14683	115	1,14798	114	1,14912	115	0,13
1,15604	116	1,15720	115	1,15835	116	1,15951	116	1,16067	116	0,14
1,16766	117	1,16883	117	1,17000	117	1,17117	117	1,17234	117	0,15
1,17939	118	1,18057	118	1,18175	119	1,18294	118	1,18412	118	0,16
1,19125	119	1,19244	119	1,19363	120	1,19483	119	1,19602	120	0,17
1,20322	120	1,20442	121	1,20563	120	1,20683	121	1,20804	121	0,18
1,21531	122	1,21653	121	1,21774	122	1,21896	122	1,22018	122	0,19
1,22753	122	1,22875	123	1,22998	123	1,23121	123	1,23244	124	0,20
1,23986	124	1,24110	124	1,24234	125	1,24359	124	1,24483	125	0,21
1,25232	126	1,25358	125	1,25483	126	1,25609	125	1,25734	126	0,22
1,26491	126	1,26617	127	1,26744	127	1,26871	127	1,26998	127	0,23
1,27762	128	1,27890	128	1,28018	128	1,28146	128	1,28274	129	0,24
1,29046	129	1,29175	130	1,29305	129	1,29434	129	1,29563	130	0,25
1,30343	131	1,30474	130	1,30604	131	1,30735	131	1,30866	130	0,26
1,31653	132	1,31785	132	1,31917	132	1,32049	132	1,32181	132	0,27
1,32976	133	1,33109	133	1,33242	134	1,33376	133	1,33509	134	0,28
1,34313	134	1,34447	135	1,34582	134	1,34716	135	1,34851	135	0,29
1,35663	135	1,35798	136	1,35934	136	1,36070	136	1,36206	137	0,30
1,37026	137	1,37163	137	1,37300	138	1,37438	137	1,37575	138	0,31
1,38403	139	1,38542	138	1,38680	139	1,38819	139	1,38958	139	0,32
1,39794	140	1,39934	140	1,40074	140	1,40214	140	1,40354	141	0,33
1,41199	141	1,41340	142	1,41482	141	1,41623	142	1,41765	142	0,34
1,42618	143	1,42761	143	1,42904	143	1,43047	143	1,43190	143	0,35
1,44051	145	1,44196	144	1,44340	144	1,44484	145	1,44629	144	0,36
1,45499	146	1,45645	145	1,45790	146	1,45936	146	1,46082	146	0,37
1,46961	147	1,47108	148	1,47256	147	1,47403	147	1,47550	148	0,38
1,48438	149	1,48587	149	1,48736	148	1,48884	149	1,49033	149	0,39
1,49930	150	1,50080	150	1,50230	151	1,50381	150	1,50531	151	0,40
1,51437	152	1,51589	151	1,51740	152	1,51892	152	1,52044	152	0,41
1,52959	153	1,53112	153	1,53265	154	1,53419	153	1,53572	154	0,42
1,54496	155	1,54651	155	1,54806	154	1,54960	156	1,55116	155	0,43
1,56049	156	1,56205	156	1,56361	157	1,56518	156	1,56674	157	0,44
1,57617	158	1,57775	158	1,57933	158	1,58091	158	1,58249	158	0,45
1,59201	160	1,59361	159	1,59520	160	1,59680	159	1,59839	160	0,46
1,60801	161	1,60962	161	1,61123	162	1,61285	161	1,61446	161	0,47
1,62418	162	1,62580	163	1,62743	162	1,62905	163	1,63068	164	0,48
1,64050	164	1,64214	164	1,64378	165	1,64543	164	1,64707	165	0,49

e^x

The error of the approximations given on pp. 138 and 139 is not greater than 0,000005 and the error of an approximation obtained by linear interpolation is less than 0,00000521 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
0,50	1,64872	165	1,65037	165	1,65202	165	1,65367	166	1,65533	166
0,51	1,66529	167	1,66696	167	1,66863	166	1,67029	168	1,67197	167
0,52	1,68203	168	1,68371	169	1,68540	168	1,68708	169	1,68877	169
0,53	1,69893	170	1,70063	170	1,70233	171	1,70404	170	1,70574	171
0,54	1,71601	171	1,71772	172	1,71944	172	1,72116	172	1,72288	173
0,55	1,73325	174	1,73499	173	1,73672	174	1,73846	174	1,74020	174
0,56	1,75067	175	1,75242	176	1,75418	175	1,75593	176	1,75769	176
0,57	1,76827	177	1,77004	177	1,77181	177	1,77358	177	1,77535	178
0,58	1,78604	179	1,78783	178	1,78961	179	1,79140	180	1,79320	179
0,59	1,80399	180	1,80579	181	1,80760	181	1,80941	181	1,81122	181
0,60	1,82212	182	1,82394	183	1,82577	182	1,82759	183	1,82942	183
0,61	1,84043	184	1,84227	185	1,84412	184	1,84596	185	1,84781	185
0,62	1,85893	186	1,86079	186	1,86265	186	1,86451	187	1,86638	187
0,63	1,87761	188	1,87949	188	1,88137	188	1,88325	189	1,88514	188
0,64	1,89648	190	1,89838	190	1,90028	190	1,90218	190	1,90408	191
0,65	1,91554	192	1,91746	192	1,91938	192	1,92130	192	1,92322	192
0,66	1,93479	194	1,93673	194	1,93867	194	1,94061	194	1,94255	194
0,67	1,95424	195	1,95619	196	1,95815	196	1,96011	196	1,96207	196
0,68	1,97388	197	1,97585	198	1,97783	198	1,97981	198	1,98179	198
0,69	1,99372	199	1,99571	200	1,99771	200	1,99971	200	2,00171	200
0,70	2,01375	202	2,01577	201	2,01778	202	2,01980	202	2,02182	203
0,71	2,03399	204	2,03603	203	2,03806	204	2,04010	204	2,04214	205
0,72	2,05443	206	2,05649	206	2,05855	206	2,06061	206	2,06267	206
0,73	2,07508	208	2,07716	207	2,07923	209	2,08132	208	2,08340	208
0,74	2,09594	209	2,09803	210	2,10013	210	2,10223	211	2,10434	210
0,75	2,11700	212	2,11912	212	2,12124	212	2,12336	212	2,12548	213
0,76	2,13828	214	2,14042	214	2,14256	214	2,14470	215	2,14685	214
0,77	2,15977	216	2,16193	216	2,16409	217	2,16626	216	2,16842	217
0,78	2,18147	218	2,18365	219	2,18584	219	2,18803	219	2,19022	219
0,79	2,20340	220	2,20560	221	2,20781	221	2,21002	221	2,21223	221
0,80	2,22554	223	2,22777	223	2,23000	223	2,23223	223	2,23446	224
0,81	2,24791	225	2,25016	225	2,25241	225	2,25466	226	2,25692	226
0,82	2,27050	227	2,27277	228	2,27505	227	2,27732	228	2,27960	228
0,83	2,29332	229	2,29561	230	2,29791	230	2,30021	230	2,30251	230
0,84	2,31637	231	2,31868	232	2,32100	233	2,32333	232	2,32565	233
0,85	2,33965	234	2,34199	234	2,34433	235	2,34668	234	2,34902	235
0,86	2,36316	237	2,36553	236	2,36789	237	2,37026	237	2,37263	238
0,87	2,38691	239	2,38930	239	2,39169	239	2,39408	240	2,39648	240
0,88	2,41090	241	2,41331	242	2,41573	241	2,41814	242	2,42056	242
0,89	2,43513	244	2,43757	243	2,44000	245	2,44245	244	2,44489	245
0,90	2,45960	246	2,46206	247	2,46453	246	2,46699	247	2,46946	247
0,91	2,48432	249	2,48681	249	2,48930	249	2,49179	249	2,49428	250
0,92	2,50929	251	2,51180	251	2,51431	252	2,51683	252	2,51935	252
0,93	2,53451	253	2,53704	254	2,53958	254	2,54212	255	2,54467	254
0,94	2,55998	256	2,56254	257	2,56511	256	2,56767	257	2,57024	257
0,95	2,58571	259	2,58830	259	2,59089	259	2,59348	259	2,59607	260
0,96	2,61170	261	2,61431	262	2,61693	261	2,61954	262	2,62216	263
0,97	2,63794	264	2,64058	265	2,64323	264	2,64587	265	2,64852	265
0,98	2,66446	266	2,66712	267	2,66979	267	2,67246	268	2,67514	267
0,99	2,69123	270	2,69393	269	2,69662	270	2,69932	270	2,70202	270

Błąd przybliżeń podanych na str. 140 i 141 jest nie większy niż 0,000005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,00000534 + błąd zaokrąglenia wyniku.

Przykład. Aby obliczyć $e^{0,784132}$, odczytujemy w tablicy, że $e^{0,784} \approx 2,19022$ i $\delta = 219$. W tablicy poprawek odczytujemy dla $\delta = 219$ i cyfr 1, 3 i 2 liczby 21,9, 65,7 i 43,8. Zatem $e^{0,784132} \approx 2,19022 + 0,000219 + 0,0000657 + 0,00000438 = 2,19050908$ z dokładnością do 0,00000534, skąd $e^{0,784132} \approx 2,19051$ z dokładnością do 0,0000063. (Poprawkę do liczby $e^{0,784} \approx 2,19022$ można również obliczyć mnożąc $0,132 \cdot \delta = 0,132 \cdot 219 = 28,908$. Mamy wtedy $e^{0,784132} \approx 2,19022 + 0,00028908 = 2,19050908$, jak poprzednio).

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
1,65699	165	1,65864	166	1,66030	166	1,66196	167	1,66363	166	0,50
1,67364	167	1,67531	168	1,67699	168	1,67867	168	1,68035	168	0,51
1,69046	169	1,69215	169	1,69384	170	1,69554	169	1,69723	170	0,52
1,70745	171	1,70916	171	1,71087	171	1,71258	171	1,71429	172	0,53
1,72461	172	1,72633	173	1,72806	173	1,72979	173	1,73152	173	0,54
1,74194	174	1,74368	175	1,74543	174	1,74717	175	1,74892	175	0,55
1,75945	176	1,76121	176	1,76297	176	1,76473	177	1,76650	177	0,56
1,77713	178	1,77891	178	1,78069	178	1,78247	178	1,78425	179	0,57
1,79499	180	1,79679	179	1,79858	180	1,80038	181	1,80219	180	0,58
1,81303	181	1,81484	182	1,81666	182	1,81848	182	1,82030	182	0,59
1,83125	183	1,83308	184	1,83492	183	1,83675	184	1,83859	184	0,60
1,84966	185	1,85151	185	1,85336	185	1,85521	186	1,85707	186	0,61
1,86825	187	1,87012	187	1,87199	187	1,87386	187	1,87573	188	0,62
1,88702	189	1,88891	189	1,89080	189	1,89269	190	1,89459	189	0,63
1,90599	190	1,90789	191	1,90980	191	1,91171	192	1,91363	191	0,64
1,92514	193	1,92707	193	1,92900	193	1,93093	193	1,93286	193	0,65
1,94449	195	1,94644	194	1,94838	195	1,95033	195	1,95228	196	0,66
1,96403	197	1,96600	196	1,96796	197	1,96993	197	1,97190	198	0,67
1,98377	199	1,98576	198	1,98774	199	1,98973	199	1,99172	200	0,68
2,00371	200	2,00571	201	2,00772	201	2,00973	201	2,01174	201	0,69
2,02385	202	2,02587	203	2,02790	203	2,02993	203	2,03196	203	0,70
2,04419	204	2,04623	205	2,04828	205	2,05033	205	2,05238	205	0,71
2,06473	207	2,06680	206	2,06886	207	2,07093	208	2,07301	207	0,72
2,08548	209	2,08757	209	2,08966	209	2,09175	209	2,09384	210	0,73
2,10644	211	2,10855	211	2,11066	211	2,11277	211	2,11488	212	0,74
2,12761	213	2,12974	213	2,13187	213	2,13400	214	2,13614	214	0,75
2,14899	215	2,15114	216	2,15330	215	2,15545	216	2,15761	216	0,76
2,17059	217	2,17276	218	2,17494	217	2,17711	218	2,17929	218	0,77
2,19241	219	2,19460	220	2,19680	219	2,19899	220	2,20119	221	0,78
2,21444	222	2,21666	221	2,21887	222	2,22109	223	2,22332	222	0,79
2,23670	223	2,23893	224	2,24117	225	2,24342	224	2,24566	225	0,80
2,25918	226	2,26144	226	2,26370	226	2,26596	227	2,26823	227	0,81
2,28188	228	2,28416	229	2,28645	229	2,28874	229	2,29103	229	0,82
2,30481	231	2,30712	231	2,30943	231	2,31174	231	2,31405	232	0,83
2,32798	233	2,33031	233	2,33264	233	2,33497	234	2,33731	234	0,84
2,35137	236	2,35373	235	2,35608	236	2,35844	236	2,36080	236	0,85
2,37501	237	2,37738	238	2,37976	238	2,38214	239	2,38453	238	0,86
2,39888	240	2,40128	240	2,40368	240	2,40608	241	2,40849	241	0,87
2,42298	243	2,42541	243	2,42784	242	2,43026	244	2,43270	243	0,88
2,44734	244	2,44978	246	2,45224	245	2,45469	245	2,45714	246	0,89
2,47193	248	2,47441	247	2,47688	248	2,47936	248	2,48184	248	0,90
2,49678	249	2,49927	250	2,50177	251	2,50428	250	2,50678	251	0,91
2,52187	252	2,52439	253	2,52692	253	2,52945	253	2,53198	253	0,92
2,54721	255	2,54976	255	2,55231	256	2,55487	255	2,55742	256	0,93
2,57281	258	2,57539	257	2,57796	258	2,58054	259	2,58313	258	0,94
2,59867	260	2,60127	260	2,60387	261	2,60648	261	2,60909	261	0,95
2,62479	262	2,62741	263	2,63004	263	2,63267	264	2,63531	263	0,96
2,65117	265	2,65382	265	2,65647	266	2,65913	266	2,66179	267	0,97
2,67781	268	2,68049	268	2,68317	269	2,68586	268	2,68854	269	0,98
2,70472	271	2,70743	271	2,71014	271	2,71285	271	2,71556	272	0,99

e^x

The error of the approximations given on pp. 140 and 141 is not greater than 0,000005 and the error of an approximation obtained by linear interpolation is less than 0,00000534 + the error of rounding off the result.

Example. To find $e^{0,784132}$ we read in the table that $e^{0,784} \approx 2,19022$ and $\delta = 219$. In the table of proportional parts we find for $\delta = 219$ and the figures 1, 3 and 2 the numbers 21,9, 65,7 and 43,8. Consequently $e^{0,784132} \approx 2,19022 + 0,000219 + 0,0000657 + 0,00000438 = 2,19050908$ with error less than 0,00000534, whence $e^{0,784132} \approx 2,19051$ with error less than 0,0000063. (The correction for the number $e^{0,784} \approx 2,19022$ can also be found by multiplying $0,132 \cdot \delta = 0,132 \cdot 219 = 28,908$. We then have $e^{0,784132} \approx 2,19022 + 0,00028908 = 2,19050908$ as before).

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
1,00	2,71828	272	2,72100	272	2,72372	273	2,72645	273	2,72918	273
1,01	2,74560	275	2,74835	275	2,75110	275	2,75385	276	2,75661	275
1,02	2,77319	278	2,77597	278	2,77875	278	2,78153	278	2,78431	279
1,03	2,80107	280	2,80387	280	2,80667	281	2,80948	281	2,81229	282
1,04	2,82922	283	2,83205	283	2,83488	284	2,83772	284	2,84056	284
1,05	2,85765	286	2,86051	286	2,86337	287	2,86624	286	2,86910	288
1,06	2,88637	289	2,88926	289	2,89215	289	2,89504	290	2,89794	290
1,07	2,91538	292	2,91830	292	2,92122	292	2,92414	292	2,92706	293
1,08	2,94468	295	2,94763	294	2,95057	296	2,95353	295	2,95648	296
1,09	2,97427	298	2,97725	298	2,98023	298	2,98321	298	2,98619	299
1,10	3,00417	300	3,00717	301	3,01018	301	3,01319	302	3,01621	301
1,11	3,03436	303	3,03739	304	3,04043	305	3,04348	304	3,04652	305
1,12	3,06485	307	3,06792	307	3,07099	307	3,07406	308	3,07714	308
1,13	3,09566	309	3,09875	310	3,10185	311	3,10496	310	3,10806	311
1,14	3,12677	313	3,12990	313	3,13303	313	3,13616	314	3,13930	314
1,15	3,15819	316	3,16135	317	3,16452	316	3,16768	317	3,17085	317
1,16	3,18993	319	3,19312	320	3,19632	320	3,19952	320	3,20272	320
1,17	3,22199	323	3,22522	322	3,22844	323	3,23167	324	3,23491	323
1,18	3,25437	326	3,25763	326	3,26089	326	3,26415	327	3,26742	327
1,19	3,28708	329	3,29037	329	3,29366	330	3,29696	330	3,30026	330
1,20	3,32012	332	3,32344	332	3,32676	333	3,33009	333	3,33342	334
1,21	3,35348	336	3,35684	336	3,36020	336	3,36356	337	3,36693	336
1,22	3,38719	339	3,39058	339	3,39397	339	3,39736	340	3,40076	341
1,23	3,42123	342	3,42465	343	3,42808	343	3,43151	343	3,43494	344
1,24	3,45561	346	3,45907	346	3,46253	347	3,46600	346	3,46946	347
1,25	3,49034	350	3,49384	349	3,49733	350	3,50083	350	3,50433	351
1,26	3,52542	353	3,52895	353	3,53248	353	3,53601	354	3,53955	354
1,27	3,56085	357	3,56442	356	3,56798	357	3,57155	357	3,57512	358
1,28	3,59664	360	3,60024	360	3,60384	361	3,60745	361	3,61106	361
1,29	3,63279	363	3,63642	364	3,64006	364	3,64370	365	3,64735	365
1,30	3,66930	367	3,67297	367	3,67664	368	3,68032	368	3,68400	369
1,31	3,70617	371	3,70988	371	3,71359	372	3,71731	372	3,72103	372
1,32	3,74342	375	3,74717	375	3,75092	375	3,75467	376	3,75843	376
1,33	3,78104	379	3,78483	378	3,78861	379	3,79240	380	3,79620	380
1,34	3,81904	382	3,82286	383	3,82669	383	3,83052	383	3,83435	384
1,35	3,85743	385	3,86128	387	3,86515	387	3,86902	387	3,87289	387
1,36	3,89619	390	3,90009	390	3,90399	391	3,90790	391	3,91181	391
1,37	3,93535	394	3,93929	394	3,94323	394	3,94717	395	3,95112	396
1,38	3,97490	398	3,97888	398	3,98286	398	3,98684	399	3,99083	400
1,39	4,01485	402	4,01887	402	4,02289	402	4,02691	403	4,03094	403
1,40	4,05520	406	4,05926	406	4,06332	406	4,06738	407	4,07145	408
1,41	4,09596	409	4,10005	411	4,10416	410	4,10826	411	4,11237	412
1,42	4,13712	414	4,14126	414	4,14540	415	4,14955	415	4,15370	416
1,43	4,17870	418	4,18288	418	4,18706	419	4,19125	420	4,19545	420
1,44	4,22070	422	4,22492	423	4,22915	423	4,23338	423	4,23761	424
1,45	4,26311	427	4,26738	427	4,27165	427	4,27592	428	4,28020	428
1,46	4,30596	431	4,31027	431	4,31458	432	4,31890	432	4,32322	432
1,47	4,34924	435	4,35359	435	4,35794	436	4,36230	437	4,36667	437
1,48	4,39295	439	4,39734	440	4,40174	440	4,40614	441	4,41055	442
1,49	4,43710	443	4,44153	445	4,44598	445	4,45043	445	4,45488	446

Błąd przybliżeń podanych na str. 142 i 143 jest nie większy niż 0,000005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,00000557 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
2,73191	273	2,73464	274	2,73738	274	2,74012	274	2,74286	274	1,00
2,75936	276	2,76212	277	2,76489	276	2,76765	277	2,77042	277	1,01
2,78710	278	2,78988	280	2,79268	279	2,79547	280	2,79827	280	1,02
2,81511	281	2,81792	282	2,82074	282	2,82356	283	2,82639	283	1,03
2,84340	284	2,84624	285	2,84909	285	2,85194	285	2,85479	286	1,04
2,87198	287	2,87485	287	2,87772	288	2,88060	289	2,88349	288	1,05
2,90084	290	2,90374	291	2,90665	290	2,90955	292	2,91247	291	1,06
2,92999	293	2,93292	294	2,93586	294	2,93880	294	2,94174	294	1,07
2,95944	296	2,96240	296	2,96536	297	2,96833	297	2,97130	297	1,08
2,98918	299	2,99217	300	2,99517	299	2,99816	300	3,00116	301	1,09
3,01922	303	3,02225	302	3,02527	303	3,02830	303	3,03133	303	1,10
3,04957	305	3,05262	305	3,05567	306	3,05873	306	3,06179	306	1,11
3,08022	308	3,08330	308	3,08638	309	3,08947	309	3,09256	310	1,12
3,11117	312	3,11429	311	3,11740	312	3,12052	312	3,12364	313	1,13
3,14244	315	3,14559	314	3,14873	315	3,15188	316	3,15504	315	1,14
3,17402	318	3,17720	318	3,18038	318	3,18356	318	3,18674	319	1,15
3,20592	321	3,20913	321	3,21234	322	3,21556	321	3,21877	322	1,16
3,23814	324	3,24138	325	3,24463	324	3,24787	325	3,25112	325	1,17
3,27069	327	3,27396	327	3,27723	328	3,28051	329	3,28380	328	1,18
3,30356	330	3,30686	331	3,31017	331	3,31348	332	3,31680	332	1,19
3,33676	334	3,34010	334	3,34344	334	3,34678	335	3,35013	335	1,20
3,37029	338	3,37367	337	3,37704	338	3,38042	338	3,38380	339	1,21
3,40417	340	3,40757	341	3,41098	341	3,41439	342	3,41781	342	1,22
3,43838	344	3,44182	344	3,44526	345	3,44871	345	3,45216	345	1,23
3,47293	348	3,47641	348	3,47989	348	3,48337	348	3,48685	349	1,24
3,50784	351	3,51135	351	3,51486	352	3,51838	352	3,52190	352	1,25
3,54309	355	3,54664	355	3,55019	355	3,55374	355	3,55729	356	1,26
3,57870	358	3,58228	359	3,58587	358	3,58945	359	3,59304	360	1,27
3,61467	361	3,61828	362	3,62190	363	3,62553	363	3,62916	363	1,28
3,65100	365	3,65465	366	3,65831	366	3,66197	366	3,66563	367	1,29
3,68769	369	3,69138	369	3,69507	370	3,69877	370	3,70247	370	1,30
3,72475	373	3,72848	373	3,73221	373	3,73594	374	3,73968	374	1,31
3,76219	376	3,76595	377	3,76972	377	3,77349	377	3,77726	378	1,32
3,80000	380	3,80380	380	3,80760	381	3,81141	382	3,81523	381	1,33
3,83819	384	3,84203	384	3,84587	385	3,84972	385	3,85357	386	1,34
3,87676	388	3,88064	388	3,88452	389	3,88841	389	3,89230	389	1,35
3,91572	392	3,91964	392	3,92356	393	3,92749	393	3,93142	393	1,36
3,95508	395	3,95903	396	3,96299	397	3,96696	397	3,97093	397	1,37
3,99483	399	3,99882	400	4,00282	401	4,00683	401	4,01084	401	1,38
4,03497	404	4,03901	404	4,04305	405	4,04710	405	4,05115	405	1,39
4,07553	407	4,07960	409	4,08369	408	4,08777	409	4,09186	410	1,40
4,11649	412	4,12061	412	4,12473	412	4,12885	414	4,13299	413	1,41
4,15786	416	4,16202	416	4,16618	417	4,17035	417	4,17452	418	1,42
4,19965	420	4,20385	420	4,20805	421	4,21226	422	4,21648	422	1,43
4,24185	425	4,24610	424	4,25034	426	4,25460	425	4,25885	426	1,44
4,28448	429	4,28877	429	4,29306	430	4,29736	430	4,30166	430	1,45
4,32754	433	4,33187	434	4,33621	434	4,34055	434	4,34489	435	1,46
4,37104	437	4,37541	438	4,37979	438	4,38417	438	4,38855	440	1,47
4,41497	441	4,41938	442	4,42380	443	4,42823	443	4,43266	444	1,48
4,45934	446	4,46380	446	4,46826	447	4,47273	448	4,47721	448	1,49

e^x

The error of the approximations given an pp. 142 and 143 is not greater than 0,000005 and the error of an approximation obtained by linear interpolation is less than 0,00000557 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
1,50	4,48169	448	4,48617	449	4,49066	449	4,49515	450	4,49965	450
1,51	4,52673	453	4,53126	453	4,53579	454	4,54033	454	4,54487	455
1,52	4,57223	457	4,57680	458	4,58138	458	4,58596	459	4,59055	459
1,53	4,61818	462	4,62280	462	4,62742	463	4,63205	464	4,63669	464
1,54	4,66459	467	4,66926	467	4,67393	468	4,67861	468	4,68329	468
1,55	4,71147	471	4,71618	472	4,72090	473	4,72563	472	4,73035	474
1,56	4,75882	476	4,76358	477	4,76835	477	4,77312	477	4,77789	478
1,57	4,80665	481	4,81146	481	4,81627	482	4,82109	482	4,82591	483
1,58	4,85496	485	4,85981	487	4,86468	486	4,86954	487	4,87441	488
1,59	4,90375	491	4,90866	491	4,91357	491	4,91848	492	4,92340	493
1,60	4,95303	496	4,95799	496	4,96295	496	4,96791	497	4,97288	498
1,61	5,00281	501	5,00782	501	5,01283	501	5,01784	502	5,02286	503
1,62	5,05309	506	5,05815	506	5,06321	506	5,06827	507	5,07334	508
1,63	5,10387	511	5,10898	511	5,11409	512	5,11921	512	5,12433	513
1,64	5,15517	516	5,16033	516	5,16549	517	5,17066	517	5,17583	518
1,65	5,20698	521	5,21219	521	5,21740	522	5,22262	523	5,22785	523
1,66	5,25931	526	5,26457	527	5,26984	527	5,27511	528	5,28039	528
1,67	5,31217	531	5,31748	532	5,32280	533	5,32813	533	5,33346	534
1,68	5,36556	536	5,37092	538	5,37630	538	5,38168	538	5,38706	539
1,69	5,41948	542	5,42490	543	5,43033	543	5,43576	544	5,44120	545
1,70	5,47395	547	5,47942	549	5,48491	548	5,49039	550	5,49589	550
1,71	5,52896	553	5,53449	554	5,54003	554	5,54557	555	5,55112	556
1,72	5,58453	559	5,59012	559	5,59571	560	5,60131	560	5,60691	561
1,73	5,64065	565	5,64630	565	5,65195	565	5,65760	566	5,66326	567
1,74	5,69734	570	5,70304	571	5,70875	571	5,71446	572	5,72018	572
1,75	5,75460	576	5,76036	576	5,76612	577	5,77189	578	5,77767	578
1,76	5,81244	581	5,81825	582	5,82407	583	5,82990	583	5,83573	584
1,77	5,87085	588	5,87673	588	5,88261	588	5,88849	589	5,89438	590
1,78	5,92986	593	5,93579	594	5,94173	594	5,94767	595	5,95362	596
1,79	5,98945	599	5,99544	600	6,00144	601	6,00745	601	6,01346	601
1,80	6,04965	605	6,05570	606	6,06176	606	6,06782	607	6,07389	608
1,81	6,11045	611	6,11656	612	6,12268	613	6,12881	613	6,13494	614
1,82	6,17186	617	6,17803	618	6,18421	619	6,19040	620	6,19660	620
1,83	6,23389	623	6,24012	625	6,24637	625	6,25262	625	6,25887	626
1,84	6,29654	630	6,30284	630	6,30914	632	6,31546	631	6,32177	633
1,85	6,35982	636	6,36618	637	6,37255	638	6,37893	638	6,38531	639
1,86	6,42374	642	6,43016	644	6,43660	644	6,44304	644	6,44948	646
1,87	6,48830	649	6,49479	650	6,50129	650	6,50779	651	6,51430	652
1,88	6,55350	656	6,56006	656	6,56662	657	6,57319	658	6,57977	658
1,89	6,61937	662	6,62599	663	6,63262	664	6,63926	664	6,64590	665
1,90	6,68589	669	6,69258	670	6,69928	670	6,70598	671	6,71269	672
1,91	6,75309	676	6,75985	676	6,76661	677	6,77338	678	6,78016	678
1,92	6,82096	682	6,82778	683	6,83461	684	6,84145	685	6,84830	685
1,93	6,88951	689	6,89640	690	6,90330	691	6,91021	691	6,91712	692
1,94	6,95875	696	6,96571	697	6,97268	698	6,97966	698	6,98664	699
1,95	7,02869	703	7,03572	704	7,04276	705	7,04981	705	7,05686	706
1,96	7,09933	710	7,10643	711	7,11354	712	7,12066	712	7,12778	713
1,97	7,17068	717	7,17785	718	7,18503	719	7,19222	720	7,19942	720
1,98	7,24274	725	7,24999	725	7,25724	726	7,26450	727	7,27177	728
1,99	7,31553	732	7,32285	733	7,33018	733	7,33751	734	7,34485	735

Błąd przybliżeń podanych na str. 144 i 145 jest nie większy niż 0,000005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,00000593 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
4,50415	451	4 50866	451	4,51317	452	4,51769	452	4,52221	452	1,50
4,54942	455	4,55397	456	4,55853	456	4,56309	457	4,56766	457	1,51
4,59514	460	4,59974	460	4,60434	461	4,60895	461	4,61356	462	1,52
4,64133	464	4,64597	465	4,65062	465	4,65527	466	4,65993	466	1,53
4,68797	469	4,69266	470	4,69736	470	4,70206	470	4,70676	471	1,54
4,73509	473	4,73982	475	4,74457	474	4,74931	475	4,75406	476	1,55
4,78267	479	4,78746	479	4,79225	479	4,79704	480	4,80184	481	1,56
4,83074	483	4,83557	484	4,84041	485	4,84526	484	4,85010	486	1,57
4,87929	488	4,88417	489	4,88906	489	4,89395	490	4,89885	490	1,58
4,92833	493	4,93326	494	4,93820	494	4,94314	494	4,94808	495	1,59
4,97786	498	4,98284	499	4,98783	499	4 99282	499	4,99781	500	1,60
5,02789	503	5,03292	503	5,03795	504	5,04299	505	5,04804	505	1,61
5,07842	508	5,08350	509	5,08859	509	5,09368	509	5,09877	510	1,62
5,12946	513	5,13459	514	5,13973	514	5,14487	515	5,15002	515	1,63
5,18101	518	5,18619	519	5,19138	520	5,19658	520	5,20178	520	1,64
5,23308	524	5,23832	524	5,24356	524	5,24880	525	5,25405	526	1,65
5,28567	529	5,29096	530	5,29626	529	5,30155	531	5,30686	531	1,66
5,33880	534	5,34414	534	5,34948	536	5,35484	535	5,36019	537	1,67
5,39245	540	5,39785	540	5,40325	540	5,40865	541	5,41406	542	1,68
5,44665	545	5,45210	545	5,45755	546	5,46301	547	5,46848	547	1,69
5,50139	550	5,50689	551	5,51240	551	5,51791	553	5,52344	552	1,70
5,55668	555	5,56223	557	5,56780	557	5,57337	558	5,57895	558	1,71
5,61252	562	5,61814	562	5,62376	562	5,62938	564	5,63502	563	1,72
5,66893	567	5,67460	568	5,68028	568	5,68596	569	5,69165	569	1,73
5,72590	573	5,73163	573	5,73736	574	5,74310	575	5,74885	575	1,74
5,78345	578	5,78923	580	5,79503	579	5,80082	581	5,80663	581	1,75
5,84157	585	5,84742	585	5,85327	585	5,85912	587	5,86499	586	1,76
5,90028	590	5,90618	591	5,91209	592	5,91801	592	5,92393	593	1,77
5,95958	596	5,96554	597	5,97151	598	5,97749	598	5,98347	598	1,78
6,01947	603	6,02550	603	6,03153	603	6,03756	604	6,04360	605	1,79
6,07997	608	6,08605	609	6,09214	610	6,09824	610	6,10434	611	1,80
6,14108	614	6,14722	615	6,15337	616	6,15953	616	6,16569	617	1,81
6,20280	620	6,20900	621	6,21521	622	6,22143	623	6,22766	623	1,82
6,26513	627	6,27140	628	6,27768	628	6,28396	628	6,29024	630	1,83
6,32810	633	6,33443	634	6,34077	634	6,34711	635	6,35346	636	1,84
6,39170	639	6,39809	640	6,40449	641	6,41090	642	6,41732	642	1,85
6,45594	646	6,46240	646	6,46886	647	6,47533	648	6,48181	649	1,86
6,52082	652	6,52734	653	6,53387	654	6,54041	654	6,54695	655	1,87
6,58635	659	6,59294	660	6,59954	660	6,60614	661	6,61275	662	1,88
6,65255	665	6,65920	667	6,66587	667	6,67254	667	6,67921	668	1,89
6,71941	672	6,72613	673	6,73286	674	6,73960	674	6,74634	675	1,90
6,78694	679	6,79373	680	6,80053	680	6,80733	681	6,81414	682	1,91
6,85515	686	6,86201	686	6,86887	687	6,87574	688	6,88262	689	1,92
6,92404	693	6,93097	694	6,93791	694	6,94485	695	6,95180	695	1,93
6,99363	700	7,00063	700	7,00763	701	7,01464	702	7,02166	703	1,94
7,06392	707	7,07099	707	7,07806	708	7,08514	709	7,09223	710	1,95
7,13491	714	7,14205	715	7,14920	715	7,15635	716	7,16351	717	1,96
7,20662	721	7,21383	722	7,22105	722	7,22827	723	7,23550	724	1,97
7,27905	728	7,28633	729	7,29362	730	7,30092	730	7,30822	731	1,98
7,35220	736	7,35956	736	7,36692	737	7,37429	738	7,38167	739	1,99

The error of the approximations given on pp. 144 and 145 is not greater than 0,000005 and the error of an approximation obtained by linear interpolation is less than 0,00000593 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
2,00	7,38906	739	7,39645	740	7,40385	741	7,41126	741	7,41867	742
2,01	7,46332	746	7,47078	748	7,47826	748	7,48574	749	7,49323	750
2,02	7,53832	755	7,54587	755	7,55342	755	7,56097	757	7,56854	757
2,03	7,61409	761	7,62170	763	7,62933	763	7,63696	764	7,64460	765
2,04	7,69061	769	7,69830	771	7,70601	771	7,71372	771	7,72143	773
2,05	7,76790	777	7,77567	778	7,78345	779	7,79124	779	7,79903	781
2,06	7,84597	785	7,85382	786	7,86168	786	7,86954	788	7,87742	788
2,07	7,92482	793	7,93275	794	7,94069	794	7,94863	796	7,95659	796
2,08	8,00447	801	8,01248	801	8,02049	803	8,02852	803	8,03655	804
2,09	8,08492	808	8,09300	810	8,10110	811	8,10921	811	8,11732	812
2,10	8,16617	817	8,17434	818	8,18252	819	8,19071	819	8,19890	820
2,11	8,24824	825	8,25649	826	8,26475	827	8,27302	828	8,28130	829
2,12	8,33114	833	8,33947	835	8,34782	835	8,35617	836	8,36453	837
2,13	8,41487	842	8,42329	842	8,43171	844	8,44015	844	8,44859	846
2,14	8,49944	850	8,50794	851	8,51645	852	8,52497	853	8,53350	854
2,15	8,58486	859	8,59345	860	8,60205	860	8,61065	862	8,61927	862
2,16	8,67114	867	8,67981	869	8,68850	869	8,69719	870	8,70589	871
2,17	8,75828	877	8,76705	877	8,77582	878	8,78460	879	8,79339	880
2,18	8,84631	885	8,85516	886	8,86402	887	8,87289	887	8,88176	889
2,19	8,93521	894	8,94415	895	8,95310	896	8,96206	897	8,97103	897
2,20	9,02501	903	9,03404	904	9,04308	905	9,05213	906	9,06119	906
2,21	9,11572	912	9,12484	913	9,13397	913	9,14310	915	9,15225	916
2,22	9,20733	921	9,21654	922	9,22576	923	9,23499	924	9,24423	925
2,23	9,29987	930	9,30917	931	9,31848	933	9,32781	933	9,33714	934
2,24	9,39333	940	9,40273	941	9,41214	941	9,42155	943	9,43098	944
2,25	9,48774	949	9,49723	950	9,50673	951	9,51624	952	9,52576	953
2,26	9,58309	959	9,59268	959	9,60227	961	9,61188	962	9,62150	962
2,27	9,67940	969	9,68909	969	9,69878	970	9,70848	972	9,71820	972
2,28	9,77668	978	9,78646	979	9,79625	980	9,80605	982	9,81587	982
2,29	9,87494	988	9,88482	989	9,89471	990	9,90461	991	9,91452	992
2,30	9,97418	998	9,98416	999	9,99415	1000				
2,30							10,0041	101	10,0142	100
2,31	10,0744	101	10,0845	101	10,0946	101	10,1047	101	10,1148	101
2,32	10,1757	102	10,1859	101	10,1960	102	10,2062	103	10,2165	102
2,33	10,2779	103	10,2882	103	10,2985	103	10,3088	103	10,3191	104
2,34	10,3812	104	10,3916	104	10,4020	104	10,4124	104	10,4228	105
2,35	10,4856	105	10,4961	105	10,5066	105	10,5171	105	10,5276	105
2,36	10,5910	105	10,6015	107	10,6122	106	10,6228	106	10,6334	106
2,37	10,6974	107	10,7081	107	10,7188	107	10,7295	108	10,7403	107
2,38	10,8049	108	10,8157	108	10,8265	109	10,8374	108	10,8482	109
2,39	10,9135	109	10,9244	109	10,9353	110	10,9463	109	10,9572	110
2,40	11,0232	110	11,0342	110	11,0452	111	11,0563	111	11,0674	110
2,41	11,1340	111	11,1451	112	11,1563	111	11,1674	112	11,1786	112
2,42	11,2459	112	11,2571	113	11,2684	112	11,2796	113	11,2909	113
2,43	11,3589	113	11,3702	114	11,3816	114	11,3930	114	11,4044	114
2,44	11,4730	115	11,4845	115	11,4960	115	11,5075	115	11,5190	115
2,45	11,5883	116	11,5999	116	11,6115	117	11,6232	116	11,6348	116
2,46	11,7048	117	11,7165	117	11,7282	118	11,7400	117	11,7517	118
2,47	11,8224	119	11,8343	118	11,8461	119	11,8580	118	11,8698	119
2,48	11,9413	119	11,9532	120	11,9652	119	11,9771	120	11,9891	120
2,49	12,0613	120	12,0733	121	12,0854	121	12,0975	121	12,1096	121

Błąd przybliżeń podanych na str. 146 i 147 jest dla $2,000 \leq x < 2,303$ nie większy niż 0,000005, a dla $2,303 \leq x < 2,500$ nie większy niż 0,00005. Błąd przybliżenia otrzymanego przez interpolację liniową jest dla $2,000 < x < 2,303$ mniejszy niż 0,00000626 + błąd zaokrąglenia wyniku, a dla $2,303 < x < 2,500$ mniejszy niż 0,0000516 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
7,42609	743	7,43352	744	7,44096	745	7,44841	745	7,45586	746	2,00
7,50073	750	7,50823	751	7,51574	752	7,52326	753	7,53079	753	2,01
7,57611	758	7,58369	759	7,59128	759	7,59887	761	7,60648	761	2,02
7,65225	766	7,65991	766	7,66757	767	7,67524	768	7,68292	769	2,03
7,72916	773	7,73689	774	7,74463	775	7,75238	776	7,76014	776	2,04
7,80684	781	7,81465	782	7,82247	782	7,83029	784	7,83813	784	2,05
7,88530	789	7,89319	789	7,90108	791	7,90899	791	7,91690	792	2,06
7,96455	796	7,97251	798	7,98049	799	7,98848	799	7,99647	800	2,07
8,04459	805	8,05264	806	8,06070	806	8,06876	807	8,07683	809	2,08
8,12544	813	8,13357	814	8,14171	814	8,14985	816	8,15801	816	2,09
8,20710	821	8,21531	822	8,22353	823	8,23176	824	8,24000	824	2,10
8,28959	829	8,29788	830	8,30618	831	8,31449	832	8,32281	833	2,11
8,37290	837	8,38127	839	8,38966	839	8,39805	841	8,40646	841	2,12
8,45705	846	8,46551	847	8,47398	848	8,48246	848	8,49094	850	2,13
8,54204	855	8,55059	855	8,55914	857	8,56771	857	8,57628	858	2,14
8,62789	863	8,63652	864	8,64516	865	8,65381	866	8,66247	867	2,15
8,71460	872	8,72332	873	8,73205	873	8,74078	875	8,74953	875	2,16
8,80219	880	8,81099	882	8,81981	882	8,82863	883	8,83746	885	2,17
8,89065	889	8,89954	891	8,90845	891	8,91736	892	8,92628	893	2,18
8,98000	899	8,98899	899	8,99798	900	9,00698	901	9,01599	902	2,19
9,07025	908	9,07933	908	9,08841	909	9,09750	911	9,10661	911	2,20
9,16141	917	9,17058	917	9,17975	918	9,18893	920	9,19813	920	2,21
9,25348	926	9,26274	927	9,27201	927	9,28128	929	9,29057	930	2,22
9,34648	935	9,35583	936	9,36519	937	9,37456	938	9,38394	939	2,23
9,44042	944	9,44986	946	9,45932	946	9,46878	947	9,47825	949	2,24
9,53529	954	9,54483	955	9,55438	956	9,56394	957	9,57351	958	2,25
9,63112	964	9,64076	965	9,65041	965	9,66006	967	9,66973	967	2,26
9,72792	973	9,73765	974	9,74739	976	9,75715	976	9,76691	977	2,27
9,82569	983	9,83552	984	9,84536	985	9,85521	986	9,86507	987	2,28
9,92444	993	9,93437	993	9,94430	995	9,95425	996	9,96421	997	2,29
										2,30
10,0242	100	10,0342	100	10,0442	101	10,0543	101	10,0644	100	2,30
10,1249	102	10,1351	101	10,1452	101	10,1553	102	10,1655	102	2,31
10,2267	102	10,2369	103	10,2472	102	10,2574	103	10,2677	102	2,32
10,3295	103	10,3398	103	10,3501	104	10,3605	104	10,3709	103	2,33
10,4333	104	10,4437	105	10,4542	104	10,4646	105	10,4751	105	2,34
10,5381	106	10,5487	105	10,5592	106	10,5698	106	10,5804	106	2,35
10,6440	107	10,6547	106	10,6653	107	10,6760	107	10,6867	107	2,36
10,7510	108	10,7618	107	10,7725	108	10,7833	108	10,7941	108	2,37
10,8591	108	10,8699	109	10,8808	109	10,8917	109	10,9026	109	2,38
10,9682	110	10,9792	110	10,9902	110	11,0012	110	11,0122	110	2,39
11,0784	111	11,0895	111	11,1006	111	11,1117	111	11,1228	112	2,40
11,1898	112	11,2010	112	11,2122	112	11,2234	112	11,2346	113	2,41
11,3022	113	11,3135	114	11,3249	113	11,3362	113	11,3475	114	2,42
11,4158	114	11,4272	115	11,4387	114	11,4501	115	11,4616	114	2,43
11,5305	116	11,5421	115	11,5536	116	11,5652	116	11,5768	115	2,44
11,6464	117	11,6581	116	11,6697	117	11,6814	117	11,6931	117	2,45
11,7635	118	11,7753	117	11,7870	118	11,7988	118	11,8106	118	2,46
11,8817	119	11,8936	119	11,9055	119	11,9174	119	11,9293	120	2,47
12,0011	120	12,0131	120	12,0251	121	12,0372	120	12,0492	121	2,48
12,1217	122	12,1339	121	12,1460	122	12,1582	121	12,1703	122	2,49

The error of the approximations given on pp. 146 and 147 is not greater than 0,000005 for $2,000 \leq x < 2,303$ and not greater than 0,00005 for $2,303 \leq x < 2,500$. The error of an approximation obtained by linear interpolation for $2,000 < x < 2,303$ is less than $0,00000626 +$ the error of rounding off the result and for $2,303 < x < 2,500$ less than $0,0000516 +$ the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
2,50	12,1825	122	12,1947	122	12,2069	122	12,2191	122	12,2313	123
2,51	12,3049	123	12,3172	124	12,3296	123	12,3419	123	12,3542	124
2,52	12,4286	124	12,4410	125	12,4535	124	12,4659	125	12,4784	125
2,53	12,5535	126	12,5661	125	12,5786	126	12,5912	126	12,6038	126
2,54	12,6797	127	12,6924	127	12,7051	127	12,7178	127	12,7305	127
2,55	12,8071	128	12,8199	128	12,8327	129	12,8456	128	12,8584	129
2,56	12,9358	130	12,9488	129	12,9617	130	12,9747	130	12,9877	130
2,57	13,0658	131	13,0789	131	13,0920	131	13,1051	131	13,1182	131
2,58	13,1971	132	13,2103	133	13,2236	132	13,2368	132	13,2500	133
2,59	13,3298	133	13,3431	134	13,3565	133	13,3698	134	13,3832	134
2,60	13,4637	135	13,4772	135	13,4907	135	13,5042	135	13,5177	135
2,61	13,5991	136	13,6127	136	13,6263	136	13,6399	137	13,6536	136
2,62	13,7357	138	13,7495	137	13,7632	138	13,7770	138	13,7908	138
2,63	13,8738	139	13,8877	138	13,9015	140	13,9155	139	13,9294	139
2,64	14,0132	140	14,0272	141	14,0413	140	14,0553	141	14,0694	140
2,65	14,1540	142	14,1682	142	14,1824	142	14,1966	142	14,2108	142
2,66	14,2963	143	14,3106	143	14,3249	143	14,3392	144	14,3536	143
2,67	14,4400	144	14,4544	145	14,4689	145	14,4834	144	14,4978	145
2,68	14,5851	146	14,5997	146	14,6143	146	14,6289	147	14,6436	146
2,69	14,7317	147	14,7464	148	14,7612	147	14,7759	148	14,7907	148
2,70	14,8797	149	14,8946	149	14,9095	149	14,9244	150	14,9394	149
2,71	15,0293	150	15,0443	151	15,0594	150	15,0744	151	15,0895	151
2,72	15,1803	152	15,1955	152	15,2107	152	15,2259	153	15,2412	152
2,73	15,3329	153	15,3482	154	15,3636	154	15,3790	153	15,3943	154
2,74	15,4870	155	15,5025	155	15,5180	155	15,5335	156	15,5491	155
2,75	15,6426	157	15,6583	156	15,6739	157	15,6896	157	15,7053	157
2,76	15,7998	159	15,8157	158	15,8315	158	15,8473	159	15,8632	158
2,77	15,9586	160	15,9746	160	15,9906	160	16,0066	160	16,0226	160
2,78	16,1190	161	16,1351	162	16,1513	162	16,1675	161	16,1836	162
2,79	16,2810	163	16,2973	163	16,3136	163	16,3299	164	16,3463	163
2,80	16,4446	165	16,4611	165	16,4776	165	16,4941	165	16,5106	165
2,81	16,6099	166	16,6265	167	16,6432	166	16,6598	167	16,6765	167
2,82	16,7769	167	16,7936	168	16,8104	169	16,8273	168	16,8441	168
2,83	16,9455	169	16,9624	170	16,9794	170	16,9964	170	17,0134	170
2,84	17,1158	171	17,1329	171	17,1500	172	17,1672	172	17,1844	172
2,85	17,2878	173	17,3051	173	17,3224	173	17,3397	174	17,3571	173
2,86	17,4615	175	17,4790	175	17,4965	175	17,5140	175	17,5315	176
2,87	17,6370	177	17,6547	176	17,6723	177	17,6900	177	17,7077	177
2,88	17,8143	178	17,8321	178	17,8499	179	17,8678	179	17,8857	179
2,89	17,9933	180	18,0113	180	18,0293	181	18,0474	180	18,0654	181
2,90	18,1741	182	18,1923	182	18,2105	182	18,2287	183	18,2470	182
2,91	18,3568	184	18,3752	183	18,3935	185	18,4120	184	18,4304	184
2,92	18,5413	185	18,5598	186	18,5784	186	18,5970	186	18,6156	186
2,93	18,7276	188	18,7464	187	18,7651	188	18,7839	188	18,8027	188
2,94	18,9158	190	18,9348	189	18,9537	190	18,9727	190	18,9917	190
2,95	19,1060	191	19,1251	191	19,1442	192	19,1634	191	19,1825	192
2,96	19,2980	193	19,3173	193	19,3366	194	19,3560	193	19,3753	194
2,97	19,4919	195	19,5114	195	19,5309	196	19,5505	195	19,5700	196
2,98	19,6878	197	19,7075	197	19,7272	198	19,7470	197	19,7667	198
2,99	19,8857	199	19,9056	199	19,9255	199	19,9454	200	19,9654	200

Błąd przybliżeń podanych na str. 148 i 149 jest nie większy niż 0,00005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,0000526 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
12,2436	122	12,2558	123	12,2681	122	12,2803	123	12,2926	123	2,50
12,3666	124	12,3790	124	12,3914	124	12,4038	124	12,4162	124	2,51
12,4909	125	12,5034	125	12,5159	125	12,5284	126	12,5410	125	2,52
12,6164	127	12,6291	126	12,6417	126	12,6543	127	12,6670	127	2,53
12,7432	128	12,7560	127	12,7687	128	12,7815	128	12,7943	128	2,54
12,8713	129	12,8842	129	12,8971	129	12,9100	129	12,9229	129	2,55
13,0007	130	13,0137	130	13,0267	130	13,0397	131	13,0528	130	2,56
13,1313	132	13,1445	131	13,1576	132	13,1708	131	13,1839	132	2,57
13,2633	133	13,2766	132	13,2898	133	13,3031	133	13,3164	134	2,58
13,3966	134	13,4100	134	13,4234	134	13,4368	135	13,4503	134	2,59
13,5312	136	13,5448	135	13,5583	136	13,5719	136	13,5855	136	2,60
13,6672	137	13,6809	137	13,6946	137	13,7083	137	13,7220	137	2,61
13,8046	138	13,8184	138	13,8322	139	13,8461	138	13,8599	139	2,62
13,9433	140	13,9573	139	13,9712	140	13,9852	140	13,9992	140	2,63
14,0834	141	14,0975	141	14,1116	142	14,1258	141	14,1399	141	2,64
14,2250	142	14,2392	143	14,2535	142	14,2677	143	14,2820	143	2,65
14,3679	144	14,3823	144	14,3967	144	14,4111	144	14,4255	145	2,66
14,5123	146	14,5269	145	14,5414	146	14,5560	145	14,5705	146	2,67
14,6582	147	14,6729	146	14,6875	147	14,7022	148	14,7170	147	2,68
14,8055	148	14,8203	149	14,8352	148	14,8500	149	14,8649	148	2,69
14,9543	150	14,9693	150	14,9843	149	14,9992	151	15,0143	150	2,70
15,1046	151	15,1197	151	15,1348	152	15,1500	151	15,1651	152	2,71
15,2564	153	15,2717	153	15,2870	153	15,3023	153	15,3176	153	2,72
15,4097	155	15,4252	154	15,4406	154	15,4560	155	15,4715	155	2,73
15,5646	156	15,5802	156	15,5958	156	15,6114	156	15,6270	156	2,74
15,7210	158	15,7368	157	15,7525	158	15,7683	158	15,7841	157	2,75
15,8790	159	15,8949	159	15,9108	159	15,9267	160	15,9427	159	2,76
16,0386	161	16,0547	160	16,0707	161	16,0868	161	16,1029	161	2,77
16,1998	162	16,2160	162	16,2322	163	16,2485	162	16,2647	163	2,78
16,3626	164	16,3790	164	16,3954	164	16,4118	164	16,4282	164	2,79
16,5271	165	16,5436	166	16,5602	165	16,5767	166	16,5933	166	2,80
16,6932	167	16,7099	167	16,7266	167	16,7433	168	16,7601	168	2,81
16,8609	169	16,8778	169	16,8947	169	16,9116	169	16,9285	170	2,82
17,0304	170	17,0474	171	17,0645	171	17,0816	171	17,0987	171	2,83
17,2016	172	17,2188	172	17,2360	172	17,2532	173	17,2705	173	2,84
17,3744	174	17,3918	174	17,4092	174	17,4266	175	17,4441	174	2,85
17,5491	175	17,5666	176	17,5842	176	17,6018	176	17,6194	176	2,86
17,7254	178	17,7432	177	17,7609	178	17,7787	178	17,7965	178	2,87
17,9036	179	17,9215	179	17,9394	180	17,9574	179	17,9753	180	2,88
18,0835	181	18,1016	181	18,1197	181	18,1378	182	18,1560	181	2,89
18,2652	183	18,2835	183	18,3018	183	18,3201	184	18,3385	183	2,90
18,4488	185	18,4673	184	18,4857	185	18,5042	186	18,5228	185	2,91
18,6342	187	18,6529	186	18,6715	187	18,6902	187	18,7089	187	2,92
18,8215	188	18,8403	189	18,8592	189	18,8781	188	18,8969	189	2,93
19,0107	190	19,0297	190	19,0487	191	19,0678	191	19,0869	191	2,94
19,2017	192	19,2209	193	19,2402	192	19,2594	193	19,2787	193	2,95
19,3947	194	19,4141	194	19,4335	195	19,4530	194	19,4724	195	2,96
19,5896	196	19,6092	196	19,6288	197	19,6485	196	19,6681	197	2,97
19,7865	198	19,8063	198	19,8261	199	19,8460	198	19,8658	199	2,98
19,9854	200	20,0054	200	20,0254	200	20,0454	201	20,0655	200	2,99

e^x

The error of the approximations given on pp. 148 and 149 is not greater than 0,00005 and the error of an approximation obtained by linear interpolation is less than 0,0000526 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
3,00	20,0855	201	20,1056	201	20,1257	202	20,1459	201	20,1660	202
3,01	20,2874	203	20,3077	203	20,3280	204	20,3484	203	20,3687	204
3,02	20,4913	205	20,5118	205	20,5323	206	20,5529	205	20,5734	206
3,03	20,6972	207	20,7179	208	20,7387	207	20,7594	208	20,7802	208
3,04	20,9052	210	20,9262	209	20,9471	210	20,9681	209	20,9890	210
3,05	21,1153	212	21,1365	211	21,1576	212	21,1788	212	21,2000	212
3,06	21,3276	213	21,3489	214	21,3703	213	21,3916	214	21,4130	215
3,07	21,5419	216	21,5635	215	21,5850	216	21,6066	216	21,6282	217
3,08	21,7584	218	21,7802	218	21,8020	218	21,8238	218	21,8456	219
3,09	21,9771	220	21,9991	220	22,0211	220	22,0431	221	22,0652	220
3,10	22,1980	222	22,2202	222	22,2424	222	22,2646	223	22,2869	223
3,11	22,4210	225	22,4435	224	22,4659	225	22,4884	225	22,5109	225
3,12	22,6464	226	22,6690	227	22,6917	227	22,7144	227	22,7371	228
3,13	22,8740	229	22,8969	229	22,9198	229	22,9427	230	22,9657	229
3,14	23,1039	231	23,1270	231	23,1501	232	23,1733	232	23,1965	232
3,15	23,3361	233	23,3594	234	23,3828	234	23,4062	234	23,4296	234
3,16	23,5706	236	23,5942	236	23,6178	236	23,6414	237	23,6651	236
3,17	23,8075	238	23,8313	238	23,8551	239	23,8790	239	23,9029	239
3,18	24,0468	240	24,0708	241	24,0949	241	24,1190	241	24,1431	242
3,19	24,2884	243	24,3127	244	24,3371	243	24,3614	244	24,3858	244
3,20	24,5325	246	24,5571	245	24,5816	246	24,6062	247	24,6309	246
3,21	24,7791	248	24,8039	248	24,8287	248	24,8535	249	24,8784	249
3,22	25,0281	251	25,0532	250	25,0782	251	25,1033	251	25,1284	252
3,23	25,2797	252	25,3049	254	25,3303	253	25,3556	254	25,3810	254
3,24	25,5337	256	25,5593	255	25,5848	256	25,6104	257	25,6361	256
3,25	25,7903	258	25,8161	259	25,8420	258	25,8678	259	25,8937	259
3,26	26,0495	261	26,0756	261	26,1017	261	26,1278	261	26,1539	262
3,27	26,3113	264	26,3377	263	26,3640	264	26,3904	264	26,4168	264
3,28	26,5758	266	26,6024	266	26,6290	266	26,6556	267	26,6823	267
3,29	26,8429	268	26,8697	269	26,8966	269	26,9235	270	26,9505	269
3,30	27,1126	272	27,1398	271	27,1669	272	27,1941	272	27,2213	272
3,31	27,3851	274	27,4125	275	27,4400	274	27,4674	275	27,4949	275
3,32	27,6604	276	27,6880	277	27,7157	278	27,7435	277	27,7712	278
3,33	27,9383	280	27,9663	280	27,9943	280	28,0223	280	28,0503	281
3,34	28,2191	283	28,2474	282	28,2756	283	28,3039	283	28,3322	284
3,35	28,5027	286	28,5313	285	28,5598	286	28,5884	286	28,6170	286
3,36	28,7892	288	28,8180	288	28,8468	289	28,8757	289	28,9046	289
3,37	29,0785	291	29,1076	291	29,1367	292	29,1659	292	29,1951	292
3,38	29,3708	294	29,4002	294	29,4296	294	29,4590	295	29,4885	295
3,39	29,6660	296	29,6956	297	29,7253	298	29,7551	298	29,7849	298
3,40	29,9641	300	29,9941	300	30,0241	300	30,0541	301	30,0842	301
3,41	30,2652	303	30,2955	303	30,3258	304	30,3562	303	30,3865	304
3,42	30,5694	306	30,6000	306	30,6306	307	30,6613	306	30,6919	307
3,43	30,8766	309	30,9075	310	30,9385	309	30,9694	310	31,0004	310
3,44	31,1870	312	31,2182	312	31,2494	313	31,2807	313	31,3120	313
3,45	31,5004	315	31,5319	316	31,5635	315	31,5950	316	31,6266	317
3,46	31,8170	318	31,8488	319	31,8807	319	31,9126	319	31,9445	320
3,47	32,1367	322	32,1689	322	32,2011	322	32,2333	322	32,2655	323
3,48	32,4597	325	32,4922	325	32,5247	325	32,5572	326	32,5898	326
3,49	32,7859	329	32,8188	328	32,8516	329	32,8845	329	32,9174	329

Błąd przybliżeń podanych na str. 150 i 151 jest nie większy niż 0,00005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,0000542 + błąd zaokrąglenia wyniku.
Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
20,1862	202	20,2064	202	20,2266	203	20,2469	202	20,2671	203	3,00
20,3891	204	20,4095	204	20,4299	205	20,4504	204	20,4708	205	3,01
20,5940	206	20,6146	206	20,6352	207	20,6559	206	20,6765	207	3,02
20,8010	208	20,8218	208	20,8426	209	20,8635	208	20,8843	209	3,03
21,0100	211	21,0311	210	21,0521	211	21,0732	210	21,0942	211	3,04
21,2212	212	21,2424	213	21,2637	212	21,2849	213	21,3062	214	3,05
21,4345	214	21,4559	215	21,4774	215	21,4989	215	21,5204	215	3,06
21,6499	216	21,6715	217	21,6932	217	21,7149	218	21,7367	217	3,07
21,8675	218	21,8893	219	21,9112	220	21,9332	219	21,9551	220	3,08
22,0872	221	22,1093	222	22,1315	221	22,1536	222	22,1758	222	3,09
22,3092	223	22,3315	224	22,3539	223	22,3762	224	22,3986	224	3,10
22,5334	226	22,5560	225	22,5785	226	22,6011	226	22,6237	227	3,11
22,7599	228	22,7827	228	22,8055	228	22,8283	228	22,8511	229	3,12
22,9886	230	23,0116	231	23,0347	230	23,0577	231	23,0808	231	3,13
23,2197	232	23,2429	233	23,2662	232	23,2894	233	23,3127	234	3,14
23,4530	235	23,4765	235	23,5000	235	23,5235	235	23,5470	236	3,15
23,6887	237	23,7124	238	23,7362	237	23,7599	238	23,7837	238	3,16
23,9268	240	23,9508	239	23,9747	240	23,9987	240	24,0227	241	3,17
24,1673	242	24,1915	242	24,2157	242	24,2399	243	24,2642	242	3,18
24,4102	244	24,4346	244	24,4590	245	24,4835	245	24,5080	245	3,19
24,6555	247	24,6802	247	24,7049	247	24,7296	247	24,7543	248	3,20
24,9033	249	24,9282	249	24,9531	250	24,9781	250	25,0031	250	3,21
25,1536	251	25,1787	252	25,2039	252	25,2291	253	25,2544	253	3,22
25,4064	254	25,4318	254	25,4572	255	25,4827	255	25,5082	255	3,23
25,6617	257	25,6874	257	25,7131	257	25,7388	258	25,7646	257	3,24
25,9196	259	25,9455	260	25,9715	260	25,9975	260	26,0235	260	3,25
26,1801	262	26,2063	262	26,2325	263	26,2588	262	26,2850	263	3,26
26,4432	265	26,4697	265	26,4962	265	26,5227	265	26,5492	266	3,27
26,7090	267	26,7357	268	26,7625	267	26,7892	268	26,8160	269	3,28
26,9774	270	27,0044	270	27,0314	271	27,0585	270	27,0855	271	3,29
27,2485	273	27,2758	273	27,3031	273	27,3304	274	27,3578	273	3,30
27,5224	275	27,5499	276	27,5775	276	27,6051	276	27,6327	277	3,31
27,7990	278	27,8268	279	27,8547	278	27,8825	279	27,9104	279	3,32
28,0784	281	28,1065	281	28,1346	281	28,1627	282	28,1909	282	3,33
28,3606	284	28,3890	284	28,4174	284	28,4458	284	28,4742	285	3,34
28,6456	287	28,6743	287	28,7030	287	28,7317	287	28,7604	288	3,35
28,9335	289	28,9624	290	28,9914	290	29,0204	291	29,0495	290	3,36
29,2243	292	29,2535	293	29,2828	293	29,3121	293	29,3414	294	3,37
29,5180	295	29,5475	296	29,5771	296	29,6067	296	29,6363	297	3,38
29,8147	298	29,8445	298	29,8743	299	29,9042	300	29,9342	299	3,39
30,1143	301	30,1444	302	30,1746	302	30,2048	302	30,2350	302	3,40
30,4169	305	30,4474	304	30,4778	305	30,5083	306	30,5389	305	3,41
30,7226	308	30,7534	308	30,7842	308	30,8150	308	30,8458	308	3,42
31,0314	311	31,0625	310	31,0935	311	31,1246	312	31,1558	312	3,43
31,3433	313	31,3746	314	31,4060	315	31,4375	314	31,4689	315	3,44
31,6583	317	31,6900	317	31,7217	317	31,7534	318	31,7852	318	3,45
31,9765	320	32,0085	320	32,0405	320	32,0725	321	32,1046	321	3,46
32,2978	323	32,3301	324	32,3625	324	32,3949	324	32,4273	324	3,47
32,6224	327	32,6551	326	32,6877	327	32,7204	328	32,7532	327	3,48
32,9503	330	32,9833	330	33,0163	330	33,0493	331	33,0824	331	3,49

The error of the approximations given on pp. 150 and 151 is not greater than 0,00005 and the error of an approximation obtained by linear interpolation is less than 0,0000542 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
3,50	33,1155	331	33,1486	331	33,1817	332	33,2149	333	33,2482	332
3,51	33,4483	334	33,4817	335	33,5152	336	33,5488	335	33,5823	336
3,52	33,7844	338	33,8182	339	33,8521	338	33,8859	339	33,9198	340
3,53	34,1240	341	34,1581	342	34,1923	342	34,2265	342	34,2607	343
3,54	34,4669	345	34,5014	345	34,5359	346	34,5705	346	34,6051	346
3,55	34,8133	348	34,8481	349	34,8830	349	34,9179	349	34,9528	350
3,56	35,1632	352	35,1984	352	35,2336	352	35,2688	353	35,3041	354
3,57	35,5166	355	35,5521	356	35,5877	356	35,6233	356	35,6589	357
3,58	35,8735	359	35,9094	360	35,9454	359	35,9813	360	36,0173	361
3,59	36,2341	362	36,2703	363	36,3066	363	36,3429	364	36,3793	364
3,60	36,5982	367	36,6349	366	36,6715	367	36,7082	367	36,7449	368
3,61	36,9661	369	37,0030	371	37,0401	370	37,0771	371	37,1142	371
3,62	37,3376	373	37,3749	374	37,4123	374	37,4497	375	37,4872	375
3,63	37,7128	377	37,7505	378	37,7883	378	37,8261	379	37,8640	379
3,64	38,0918	381	38,1299	382	38,1681	382	38,2063	382	38,2445	383
3,65	38,4747	385	38,5132	385	38,5517	386	38,5903	386	38,6289	386
3,66	38,8613	389	38,9002	389	38,9391	390	38,9781	390	39,0171	390
3,67	39,2519	393	39,2912	393	39,3305	393	39,3698	394	39,4092	395
3,68	39,6464	397	39,6861	397	39,7258	397	39,7655	398	39,8053	398
3,69	40,0448	401	40,0849	401	40,1250	402	40,1652	401	40,2053	403
3,70	40,4473	405	40,4878	405	40,5283	405	40,5688	406	40,6094	406
3,71	40,8538	409	40,8947	409	40,9356	410	40,9766	409	41,0175	411
3,72	41,2644	413	41,3057	413	41,3470	414	41,3884	414	41,4298	414
3,73	41,6791	417	41,7208	417	41,7625	418	41,8043	419	41,8462	418
3,74	42,0980	421	42,1401	422	42,1823	422	42,2245	422	42,2667	423
3,75	42,5211	425	42,5636	426	42,6062	426	42,6488	427	42,6915	427
3,76	42,9484	430	42,9914	430	43,0344	431	43,0775	431	43,1206	431
3,77	43,3801	434	43,4235	434	43,4669	435	43,5104	435	43,5539	436
3,78	43,8160	439	43,8599	439	43,9038	439	43,9477	440	43,9917	440
3,79	44,2564	443	44,3007	443	44,3450	444	44,3894	444	44,4338	444
3,80	44,7012	447	44,7459	448	44,7907	448	44,8355	448	44,8803	450
3,81	45,1504	452	45,1956	452	45,2408	453	45,2861	453	45,3314	454
3,82	45,6042	456	45,6498	457	45,6955	457	45,7412	458	45,7870	458
3,83	46,0625	461	46,1086	462	46,1548	461	46,2009	463	46,2472	462
3,84	46,5255	465	46,5720	466	46,6186	467	46,6653	466	46,7119	468
3,85	46,9931	470	47,0401	470	47,0871	472	47,1343	471	47,1814	472
3,86	47,4654	474	47,5128	476	47,5604	476	47,6080	476	47,6556	477
3,87	47,9424	480	47,9904	480	48,0384	480	48,0864	481	48,1345	482
3,88	48,4242	485	48,4727	485	48,5212	485	48,5697	486	48,6183	486
3,89	48,9109	489	48,9598	490	49,0088	490	49,0578	491	49,1069	492
3,90	49,4024	495	49,4519	495	49,5014	495	49,5509	496	49,6005	496
3,91	49,8990	499	49,9489	499	49,9988	501	50,0489	500	50,0989	502
3,92	50,4004	505	50,4509	504	50,5013	506	50,5519	506	50,6025	506
3,93	50,9070	509	50,9579	510	51,0089	510	51,0599	511	51,1110	511
3,94	51,4186	514	51,4700	515	51,5215	516	51,5731	516	51,6247	516
3,95	51,9354	519	51,9873	520	52,0393	521	52,0914	521	52,1435	522
3,96	52,4573	525	52,5098	525	52,5623	526	52,6149	527	52,6676	527
3,97	52,9845	530	53,0375	531	53,0906	531	53,1437	532	53,1969	532
3,98	53,5170	536	53,5706	536	53,6242	536	53,6778	537	53,7315	538
3,99	54,0549	541	54,1090	541	54,1631	542	54,2173	542	54,2715	543

Błąd przybliżeń podanych na str. 152 i 153 jest nie większy niż 0,00005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,0000569 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
33,2814	333	33,3147	334	33,3481	333	33,3814	334	33,4148	335	3,50
33,6159	337	33,6496	336	33,6832	337	33,7169	338	33,7507	337	3,51
33,9538	339	33,9877	340	34,0217	341	34,0558	341	34,0899	341	3,52
34,2950	343	34,3293	344	34,3637	344	34,3981	344	34,4325	344	3,53
34,6397	346	34,6743	347	34,7090	348	34,7438	347	34,7785	348	3,54
34,9878	350	35,0228	351	35,0579	350	35,0929	352	35,1281	351	3,55
35,3395	353	35,3748	354	35,4102	354	35,4456	355	35,4811	355	3,56
35,6946	357	35,7303	358	35,7661	358	35,8019	358	35,8377	358	3,57
36,0534	360	36,0894	361	36,1255	362	36,1617	362	36,1979	362	3,58
36,4157	364	36,4521	365	36,4886	365	36,5251	366	36,5617	365	3,59
36,7817	368	36,8185	368	36,8553	369	36,8922	369	36,9291	370	3,60
37,1513	372	37,1885	372	37,2257	373	37,2630	372	37,3002	374	3,61
37,5247	376	37,5623	375	37,5998	377	37,6375	376	37,6751	377	3,62
37,9019	379	37,9398	379	37,9777	380	38,0157	381	38,0538	380	3,63
38,2828	383	38,3211	383	38,3594	384	38,3978	384	38,4362	385	3,64
38,6675	387	38,7062	387	38,7449	388	38,7837	388	38,8225	388	3,65
39,0561	391	39,0952	391	39,1343	392	39,1735	392	39,2127	392	3,66
39,4487	394	39,4881	395	39,5276	396	39,5672	396	39,6068	396	3,67
39,8451	399	39,8850	399	39,9249	399	39,9648	400	40,0048	400	3,68
40,2456	402	40,2858	403	40,3261	404	40,3665	404	40,4069	404	3,69
40,6500	407	40,6907	407	40,7314	408	40,7722	408	40,8130	408	3,70
41,0586	411	41,0997	411	41,1408	411	41,1819	413	41,2232	412	3,71
41,4712	415	41,5127	416	41,5543	415	41,5958	416	41,6374	417	3,72
41,8880	419	41,9299	420	41,9719	420	42,0139	420	42,0559	421	3,73
42,3090	423	42,3513	424	42,3937	424	42,4361	425	42,4786	425	3,74
42,7342	428	42,7770	428	42,8198	428	42,8626	429	42,9055	429	3,75
43,1637	432	43,2069	432	43,2501	433	43,2934	433	43,3367	434	3,76
43,5975	436	43,6411	437	43,6848	437	43,7285	437	43,7722	438	3,77
44,0357	440	44,0797	441	44,1238	442	44,1680	442	44,2122	442	3,78
44,4782	445	44,5227	446	44,5673	446	44,6119	446	44,6565	447	3,79
44,9253	449	44,9702	450	45,0152	450	45,0602	451	45,1053	451	3,80
45,3768	454	45,4222	454	45,4676	455	45,5131	455	45,5586	456	3,81
45,8328	459	45,8787	459	45,9246	459	45,9705	460	46,0165	460	3,82
46,2934	463	46,3397	464	46,3861	464	46,4325	465	46,4790	465	3,83
46,7587	468	46,8055	468	46,8523	469	46,8992	469	46,9461	470	3,84
47,2286	473	47,2759	473	47,3232	473	47,3705	474	47,4179	475	3,85
47,7033	477	47,7510	478	47,7988	478	47,8466	479	47,8945	479	3,86
48,1827	482	48,2309	483	48,2792	483	48,3275	483	48,3758	484	3,87
48,6669	487	48,7156	488	48,7644	488	48,8132	488	48,8620	489	3,88
49,1561	491	49,2052	493	49,2545	492	49,3037	494	49,3531	493	3,89
49,6501	497	49,6998	497	49,7495	498	49,7993	498	49,8491	499	3,90
50,1491	501	50,1992	503	50,2495	502	50,2997	504	50,3501	503	3,91
50,6531	507	50,7038	507	50,7545	508	50,8053	508	50,8561	509	3,92
51,1621	512	51,2133	513	51,2646	513	51,3159	513	51,3672	514	3,93
51,6763	517	51,7280	518	51,7798	518	51,8316	519	51,8835	519	3,94
52,1957	522	52,2479	523	52,3002	523	52,3525	524	52,4049	524	3,95
52,7203	527	52,7730	528	52,8258	529	52,8787	529	52,9316	529	3,96
53,2501	533	53,3034	533	53,3567	534	53,4101	534	53,4635	535	3,97
53,7853	538	53,8391	539	53,8930	539	53,9469	540	54,0009	540	3,98
54,3258	544	54,3802	544	54,4346	545	54,4891	545	54,5436	556	3,99

e^x

The error of the approximations given on pp. 152 and 153 is not greater than 0,00005 and the error of an approximation obtained by linear interpolation is less than 0,0000569 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
4,00	54,5982	546	54,6528	547	54,7075	547	54,7622	548	54,8170	548
4,01	55,1469	551	55,2020	553	55,2573	553	55,3126	553	55,3679	554
4,02	55,7011	557	55,7568	558	55,8126	559	55,8685	559	55,9244	559
4,03	56,2609	563	56,3172	563	56,3735	564	56,4299	565	56,4864	565
4,04	56,8263	569	56,8832	569	56,9401	570	56,9971	570	57,0541	571
4,05	57,3975	574	57,4549	575	57,5124	575	57,5699	576	57,6275	577
4,06	57,9743	580	58,0323	581	58,0904	581	58,1485	582	58,2067	582
4,07	58,5570	585	58,6155	587	58,6742	587	58,7329	588	58,7917	588
4,08	59,1455	591	59,2046	593	59,2639	593	59,3232	593	59,3825	594
4,09	59,7399	598	59,7997	598	59,8595	599	59,9194	599	59,9793	600
4,10	60,3403	604	60,4007	604	60,4611	605	60,5216	605	60,5821	606
4,11	60,9467	610	61,0077	610	61,0687	611	61,1298	612	61,1910	612
4,12	61,5592	616	61,6208	617	61,6825	617	61,7442	618	61,8060	618
4,13	62,1779	622	62,2401	623	62,3024	623	62,3647	624	62,4271	625
4,14	62,8028	629	62,8657	629	62,9286	629	62,9915	630	63,0545	631
4,15	63,4340	635	63,4975	635	63,5610	636	63,6246	636	63,6882	638
4,16	64,0715	641	64,1356	642	64,1998	642	64,2640	643	64,3283	644
4,17	64,7155	647	64,7802	648	64,8450	649	64,9099	649	64,9748	650
4,18	65,3659	654	65,4313	654	65,4967	655	65,5622	656	65,6278	657
4,19	66,0228	660	66,0888	662	66,1550	662	66,2212	662	66,2874	663
4,20	66,6863	668	66,7531	667	66,8198	669	66,8867	669	66,9536	670
4,21	67,3565	674	67,4239	675	67,4914	675	67,5589	676	67,6265	677
4,22	68,0335	681	68,1016	681	68,1697	682	68,2379	683	68,3062	683
4,23	68,7172	688	68,7860	688	68,8548	689	68,9237	690	68,9927	690
4,24	69,4079	694	69,4773	695	69,5468	696	69,6164	696	69,6860	698
4,25	70,1054	702	70,1756	702	70,2458	702	70,3160	704	70,3864	704
4,26	70,8100	708	70,8808	709	70,9517	710	71,0227	711	71,0938	711
4,27	71,5216	716	71,5932	716	71,6648	717	71,7365	718	71,8083	718
4,28	72,2404	723	72,3127	724	72,3851	724	72,4575	725	72,5300	725
4,29	72,9665	730	73,0395	730	73,1125	732	73,1857	732	73,2589	733
4,30	73,6998	737	73,7735	738	73,8473	739	73,9212	740	73,9952	740
4,31	74,4405	745	74,5150	745	74,5895	746	74,6641	747	74,7388	748
4,32	75,1886	753	75,2639	753	75,3392	753	75,4145	755	75,4900	755
4,33	75,9443	760	76,0203	760	76,0963	762	76,1725	762	76,2487	763
4,34	76,7075	768	76,7843	768	76,8611	769	76,9380	770	77,0150	770
4,35	77,4785	775	77,5560	776	77,6336	776	77,7112	778	77,7890	778
4,36	78,2571	783	78,3354	784	78,4138	785	78,4923	785	78,5708	786
4,37	79,0436	791	79,1227	792	79,2019	792	79,2811	793	79,3604	794
4,38	79,8380	799	79,9179	800	79,9979	800	80,0779	801	80,1580	802
4,39	80,6404	807	80,7211	808	80,8019	808	80,8827	809	80,9636	810
4,40	81,4509	815	81,5324	815	81,6139	817	81,6956	817	81,7773	818
4,41	82,2695	823	82,3518	824	82,4342	824	82,5166	826	82,5992	826
4,42	83,0963	831	83,1794	832	83,2626	833	83,3459	834	83,4293	835
4,43	83,9314	840	84,0154	840	84,0994	842	84,1836	842	84,2678	843
4,44	84,7749	849	84,8598	849	84,9447	849	85,0296	851	85,1147	852
4,45	85,6269	857	85,7126	858	85,7984	858	85,8842	859	85,9701	861
4,46	86,4875	865	86,5740	867	86,6607	867	86,7474	868	86,8342	868
4,47	87,3567	874	87,4441	875	87,5316	876	87,6192	876	87,7068	878
4,48	88,2347	883	88,3230	883	88,4113	885	88,4998	885	88,5883	887
4,49	89,1214	892	89,2106	893	89,2999	893	89,3892	894	89,4786	896

Błąd przybliżeń podanych na str. 154 i 155 jest nie większy niż 0,00005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,0000613 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
54,8718	549	54,9267	550	54,9817	550	55,0367	551	55,0918	551	4,00
55,4233	554	55,4787	556	55,5343	555	55,5898	556	55,6454	557	4,01
55,9803	560	56,0363	561	56,0924	561	56,1485	562	56,2047	562	4,02
56,5429	566	56,5995	566	56,6561	567	56,7128	567	56,7695	568	4,03
57,1112	571	57,1683	572	57,2255	573	57,2828	573	57,3401	574	4,04
57,6852	577	57,7429	577	57,8006	579	57,8585	579	57,9164	579	4,05
58,2649	583	58,3232	584	58,3816	584	58,4400	584	58,4984	586	4,06
58,8505	589	58,9094	589	58,9683	590	59,0273	591	59,0864	591	4,07
59,4419	595	59,5014	595	59,5609	596	59,6205	597	59,6802	597	4,08
60,0393	601	60,0994	601	60,1595	602	60,2197	603	60,2800	603	4,09
60,6427	607	60,7034	608	60,7642	607	60,8249	609	60,8858	609	4,10
61,2522	613	61,3135	613	61,3748	614	61,4362	615	61,4977	615	4,11
61,8678	619	61,9297	620	61,9917	620	62,0537	621	62,1158	621	4,12
62,4896	625	62,5521	626	62,6147	626	62,6773	628	62,7401	627	4,13
63,1176	632	63,1808	632	63,2440	633	63,3073	633	63,3706	634	4,14
63,7520	637	63,8157	639	63,8796	639	63,9435	640	64,0075	640	4,15
64,3927	644	64,4571	645	64,5216	646	64,5862	646	64,6508	647	4,16
65,0398	651	65,1049	651	65,1700	653	65,2353	652	65,3005	654	4,17
65,6935	657	65,7592	658	65,8250	659	65,8909	659	65,9568	660	4,18
66,3537	664	66,4201	665	66,4866	665	66,5531	666	66,6197	666	4,19
67,0206	671	67,0877	671	67,1548	672	67,2220	672	67,2892	673	4,20
67,6942	677	67,7619	678	67,8297	679	67,8976	679	67,9655	680	4,21
68,3745	684	68,4429	685	68,5114	685	68,5799	686	68,6485	687	4,22
69,0617	691	69,1308	691	69,1999	693	69,2692	693	69,3385	694	4,23
69,7558	698	69,8256	698	69,8954	699	69,9653	700	70,0353	701	4,24
70,4568	705	70,5273	706	70,5979	706	70,6685	707	70,7392	708	4,25
71,1649	712	71,2361	713	71,3074	713	71,3787	714	71,4501	715	4,26
71,8801	720	71,9521	719	72,0240	721	72,0961	721	72,1682	722	4,27
72,6025	727	72,6752	727	72,7479	728	72,8207	728	72,8935	730	4,28
73,3322	734	73,4056	734	73,4790	735	73,5525	736	73,6261	737	4,29
74,0692	741	74,1433	742	74,2175	743	74,2918	743	74,3661	744	4,30
74,8136	749	74,8885	749	74,9634	750	75,0384	751	75,1135	751	4,31
75,5655	756	75,6411	757	75,7168	757	75,7925	759	75,8684	759	4,32
76,3250	763	76,4013	765	76,4778	765	76,5543	766	76,6309	766	4,33
77,0920	772	77,1692	772	77,2464	773	77,3237	773	77,4010	775	4,34
77,8668	779	77,9447	780	78,0227	781	78,1008	781	78,1789	782	4,35
78,6494	787	78,7281	788	78,8069	788	78,8857	789	78,9646	790	4,36
79,4398	795	79,5193	796	79,5989	796	79,6785	797	79,7582	798	4,37
80,2382	803	80,3185	804	80,3989	804	80,4793	805	80,5598	806	4,38
81,0446	811	81,1257	812	81,2069	812	81,2881	814	81,3695	814	4,39
81,8591	819	81,9410	820	82,0230	821	82,1051	821	82,1872	823	4,40
82,6818	828	82,7646	828	82,8474	829	82,9303	829	83,0132	831	4,41
83,5128	836	83,5964	836	83,6800	837	83,7637	838	83,8475	839	4,42
84,3521	844	84,4365	845	84,5210	846	84,6056	846	84,6902	847	4,43
85,1999	852	85,2851	853	85,3704	855	85,4559	855	85,5414	855	4,44
86,0562	861	86,1423	861	86,2284	863	86,3147	864	86,4011	864	4,45
86,9210	870	87,0080	870	87,0950	872	87,1822	872	87,2694	873	4,46
87,7946	878	87,8824	880	87,9704	880	88,0584	881	88,1465	882	4,47
88,6770	887	88,7657	888	88,8545	889	88,9434	890	89,0324	890	4,48
89,5682	896	89,6578	897	89,7475	898	89,8373	899	89,9272	899	4,49

e^x

The error of the approximations given on pp. 154 and 155 is not greater than 0,00005 and the error of an approximation obtained by linear interpolation is less than 0,0000613 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
4,50	90,0171	901	90,1072	901	90,1973	903	90,2876	903	90,3779	904
4,51	90,9218	910	91,0128	910	91,1038	912	91,1950	912	91,2862	914
4,52	91,8356	919	91,9275	920	92,0195	920	92,1115	922	92,2037	922
4,53	92,7586	928	92,8514	929	92,9443	930	93,0373	930	93,1303	932
4,54	93,6908	937	93,7845	939	93,8784	939	93,9723	940	94,0663	941
4,55	94,6324	947	94,7271	948	94,8219	948	94,9167	950	95,0117	951
4,56	95,5835	956	95,6791	957	95,7748	959	95,8707	959	95,9666	960
4,57	96,5441	966	96,6407	967	96,7374	968	96,8342	969	96,9311	969
4,58	97,5144	976	97,6120	976	97,7096	978	97,8074	978	97,9052	980
4,59	98,4944	986	98,5930	986	98,6916	988	98,7904	988	98,8892	989
4,60	99,4843	995	99,5838	997	99,6835	997	99,7832	998	99,8830	1000
4,60										
4,61	100,484	101	100,585	100	100,685	101	100,786	101	100,887	101
4,62	101,494	102	101,596	101	101,697	102	101,799	102	101,901	102
4,63	102,514	103	102,617	102	102,719	103	102,822	103	102,925	103
4,64	103,544	104	103,648	104	103,752	103	103,855	104	103,959	104
4,65	104,585	105	104,690	104	104,794	105	104,899	105	105,004	105
4,66	105,636	106	105,742	106	105,848	105	105,953	106	106,059	107
4,67	106,698	106	106,804	107	106,911	107	107,018	107	107,125	108
4,68	107,770	108	107,878	108	107,986	108	108,094	108	108,202	108
4,69	108,853	109	108,962	109	109,071	109	109,180	109	109,289	110
4,70	109,947	110	110,057	110	110,167	111	110,278	110	110,388	110
4,71	111,052	111	111,163	111	111,274	112	111,386	111	111,497	112
4,72	112,168	112	112,280	113	112,393	112	112,505	113	112,618	112
4,73	113,296	113	113,409	113	113,522	114	113,636	114	113,750	113
4,74	114,434	115	114,549	114	114,663	115	114,778	115	114,893	115
4,75	115,584	116	115,700	116	115,816	116	115,932	116	116,048	116
4,76	116,746	117	116,863	117	116,980	117	117,097	117	117,214	117
4,77	117,919	118	118,037	118	118,155	119	118,274	118	118,392	118
4,78	119,104	120	119,224	119	119,343	119	119,462	120	119,582	119
4,79	120,301	121	120,422	120	120,542	121	120,663	121	120,784	120
4,80	121,510	122	121,632	122	121,754	121	121,875	122	121,997	122
4,81	122,732	122	122,854	123	122,977	123	123,100	124	123,224	123
4,82	123,965	124	124,089	124	124,213	125	124,338	124	124,462	124
4,83	125,211	125	125,336	126	125,462	125	125,587	126	125,713	126
4,84	126,469	127	126,596	127	126,723	126	126,849	127	126,976	127
4,85	127,740	128	127,868	128	127,996	128	128,124	128	128,252	129
4,86	129,024	129	129,153	130	129,283	129	129,412	129	129,541	130
4,87	130,321	130	130,451	131	130,582	130	130,712	131	130,843	131
4,88	131,631	131	131,762	132	131,894	132	132,026	132	132,158	132
4,89	132,954	133	133,087	133	133,220	133	133,353	133	133,486	134
4,90	134,290	134	134,424	135	134,559	134	134,693	135	134,828	135
4,91	135,639	136	135,775	136	135,911	136	136,047	136	136,183	136
4,92	137,003	137	137,140	137	137,277	137	137,414	138	137,552	137
4,93	138,380	138	138,518	139	138,657	138	138,795	139	138,934	139
4,94	139,770	140	139,910	140	140,050	140	140,190	140	140,330	141
4,95	141,175	141	141,316	142	141,458	141	141,599	142	141,741	142
4,96	142,594	142	142,736	143	142,879	143	143,022	143	143,165	144
4,97	144,027	144	144,171	144	144,315	145	144,460	144	144,604	145
4,98	145,474	146	145,620	146	145,766	145	145,911	146	146,057	147
4,99	146,936	147	147,083	148	147,231	147	147,378	147	147,525	148

Błąd przybliżeń podanych na str. 156 i 157 jest dla $4,500 \leq x < 4,606$ nie większy niż 0,00005, a dla $4,606 \leq x < 5,000$ nie większy niż 0,0005. Błąd przybliżenia otrzymanego przez interpolację liniową jest dla $4,500 < x < 4,606$ mniejszy niż 0,0000626 + błąd zaokrąglenia wyniku, a dla $4,606 < x < 5,000$ mniejszy niż 0,000519 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
90,4683	906	90,5589	906	90,6495	907	90,7402	907	90,8309	909	4,50
91,3776	914	91,4690	915	91,5605	916	91,6521	917	91,7438	918	4,51
92,2959	924	92,3883	924	92,4807	925	92,5732	926	92,6658	928	4,52
93,2235	933	93,3168	933	93,4101	935	93,5036	936	93,5972	936	4,53
94,1604	942	94,2546	943	94,3489	944	94,4433	945	94,5378	946	4,54
95,1068	951	95,2019	953	95,2972	953	95,3925	954	95,4879	956	4,55
96,0626	961	96,1587	962	96,2549	963	96,3512	964	96,4476	965	4,56
97,0280	971	97,1251	972	97,2223	973	97,3196	973	97,4169	975	4,57
98,0032	980	98,1012	982	98,1994	982	98,2976	984	98,3960	984	4,58
98,9881	991	99,0872	991	99,1863	992	99,2855	994	99,3849	994	4,59
99,9830	1000									4,60
		100,083	100	100,183	100	100,283	101	100,384	100	4,60
100,988	101	101,089	101	101,190	101	101,291	102	101,393	101	4,61
102,003	102	102,105	102	102,207	102	102,309	103	102,412	102	4,62
103,028	103	103,131	103	103,234	103	103,337	104	103,441	103	4,63
104,063	104	104,167	105	104,272	104	104,376	104	104,480	105	4,64
105,109	105	105,214	106	105,320	105	105,425	105	105,530	106	4,65
106,166	106	106,272	106	106,378	107	106,485	106	106,591	107	4,66
107,233	107	107,340	107	107,447	108	107,555	107	107,662	108	4,67
108,310	109	108,419	108	108,527	109	108,636	108	108,744	109	4,68
109,399	109	109,508	110	109,618	109	109,727	110	109,837	110	4,69
110,498	111	110,609	111	110,720	110	110,830	111	110,941	111	4,70
111,609	111	111,720	112	111,832	112	111,944	112	112,056	112	4,71
112,730	113	112,843	113	112,956	113	113,069	113	113,182	114	4,72
113,863	114	113,977	114	114,091	115	114,206	114	114,320	114	4,73
115,008	115	115,123	115	115,238	115	115,353	116	115,469	115	4,74
116,164	116	116,280	116	116,396	117	116,513	116	116,629	117	4,75
117,331	118	117,449	117	117,566	118	117,684	117	117,801	118	4,76
118,510	119	118,629	119	118,748	118	118,866	119	118,985	119	4,77
119,701	120	119,821	120	119,941	120	120,061	120	120,181	120	4,78
120,904	121	121,025	121	121,146	122	121,268	121	121,389	121	4,79
122,119	123	122,242	122	122,364	122	122,486	123	122,609	123	4,80
123,347	123	123,470	124	123,594	123	123,717	124	123,841	124	4,81
124,586	125	124,711	125	124,836	125	124,961	125	125,086	125	4,82
125,839	125	125,964	127	126,091	126	126,217	126	126,343	126	4,83
127,103	127	127,230	128	127,358	127	127,485	128	127,613	127	4,84
128,381	128	128,509	129	128,638	128	128,766	129	128,895	129	4,85
129,671	130	129,801	130	129,931	130	130,061	130	130,191	130	4,86
130,974	131	131,105	131	131,236	132	131,368	131	131,499	132	4,87
132,290	133	132,423	132	132,555	133	132,688	133	132,821	133	4,88
133,620	134	133,754	134	133,888	133	134,021	135	134,156	134	4,89
134,963	135	135,098	135	135,233	135	135,368	136	135,504	135	4,90
136,319	137	136,456	136	136,592	137	136,729	137	136,866	137	4,91
137,689	138	137,827	138	137,965	138	138,103	138	138,241	139	4,92
139,073	139	139,212	140	139,352	139	139,491	140	139,631	139	4,93
140,471	140	140,611	141	140,752	141	140,893	141	141,034	141	4,94
141,883	142	142,025	142	142,167	142	142,309	142	142,451	143	4,95
143,309	143	143,452	143	143,595	144	143,739	144	143,883	144	4,96
144,749	145	144,894	145	145,039	145	145,184	145	145,329	145	4,97
146,204	146	146,350	146	146,496	147	146,643	147	146,790	146	4,98
147,673	148	147,821	148	147,969	148	148,117	148	148,265	148	4,99

The error of the approximations given on pp. 156 and 157 is not greater than 0,00005 for $4,500 \leq x < 4,606$ and not greater than 0,0005 for $4,606 \leq x < 5,000$. The error of an approximation obtained by linear interpolation for $4,500 < x < 4,606$ is less than $0,0000626 +$ the error of rounding off the result and for $4,606 < x < 5,000$ less than $0,000519 +$ the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
5,00	148,413	149	148,562	148	148,710	149	148,859	149	149,008	149
5,01	149,905	150	150,055	150	150,205	150	150,355	151	150,506	150
5,02	151,411	152	151,563	151	151,714	152	151,866	152	152,018	152
5,03	152,933	153	153,086	153	153,239	154	153,393	153	153,546	154
5,04	154,470	155	154,625	154	154,779	155	154,934	155	155,089	155
5,05	156,022	157	156,179	156	156,335	156	156,491	157	156,648	157
5,06	157,591	157	157,748	158	157,906	158	158,064	158	158,222	158
5,07	159,174	160	159,334	159	159,493	160	159,653	159	159,812	160
5,08	160,774	161	160,935	161	161,096	161	161,257	161	161,418	162
5,09	162,390	162	162,552	163	162,715	163	162,878	163	163,041	163
5,10	164,022	164	164,186	164	164,350	165	164,515	164	164,679	165
5,11	165,670	166	165,836	166	166,002	166	166,168	166	166,334	167
5,12	167,335	168	167,503	167	167,670	168	167,838	168	168,006	168
5,13	169,017	169	169,186	169	169,355	170	169,525	170	169,695	169
5,14	170,716	171	170,887	171	171,058	171	171,229	171	171,400	171
5,15	172,431	173	172,604	173	172,777	173	172,950	173	173,123	173
5,16	174,164	175	174,339	174	174,513	175	174,688	175	174,863	174
5,17	175,915	176	176,091	176	176,267	176	176,443	177	176,620	177
5,18	177,683	178	177,861	178	178,039	178	178,217	178	178,395	178
5,19	179,469	179	179,648	180	179,828	180	180,008	180	180,188	180
5,20	181,272	182	181,454	181	181,635	182	181,817	182	181,999	182
5,21	183,094	183	183,277	184	183,461	183	183,644	184	183,828	184
5,22	184,934	185	185,119	185	185,304	186	185,490	185	185,675	186
5,23	186,793	187	186,980	187	187,167	187	187,354	187	187,541	188
5,24	188,670	189	188,859	189	189,048	189	189,237	189	189,426	190
5,25	190,566	191	190,757	191	190,948	191	191,139	191	191,330	191
5,26	192,481	193	192,674	193	192,867	193	193,060	193	193,253	193
5,27	194,416	194	194,610	195	194,805	195	195,000	195	195,195	195
5,28	196,370	196	196,566	197	196,763	197	196,960	197	197,157	197
5,29	198,343	199	198,542	199	198,741	198	198,939	199	199,138	200
5,30	200,337	200	200,537	201	200,738	201	200,939	201	201,140	201
5,31	202,350	203	202,553	202	202,755	203	202,958	203	203,161	204
5,32	204,384	204	204,588	205	204,793	205	204,998	205	205,203	205
5,33	206,438	207	206,645	206	206,851	207	207,058	207	207,265	208
5,34	208,513	208	208,721	209	208,930	209	209,139	209	209,348	210
5,35	210,608	211	210,819	211	211,030	211	211,241	211	211,452	212
5,36	212,725	213	212,938	213	213,151	213	213,364	214	213,578	213
5,37	214,863	215	215,078	215	215,293	215	215,508	216	215,724	216
5,38	217,022	217	217,239	218	217,457	217	217,674	218	217,892	218
5,39	219,203	220	219,423	219	219,642	220	219,862	220	220,082	220
5,40	221,406	222	221,628	222	221,850	222	222,072	222	222,294	222
5,41	223,632	223	223,855	224	224,079	224	224,303	225	224,528	225
5,42	225,879	226	226,105	226	226,331	227	226,558	226	226,784	227
5,43	228,149	229	228,378	228	228,606	229	228,835	229	229,064	229
5,44	230,442	231	230,673	231	230,904	231	231,135	231	231,366	231
5,45	232,758	233	232,991	233	233,224	233	233,457	234	233,691	234
5,46	235,097	236	235,333	235	235,568	236	235,804	236	236,040	236
5,47	237,460	238	237,698	238	237,936	238	238,174	238	238,412	238
5,48	239,847	240	240,087	240	240,327	240	240,567	241	240,808	241
5,49	242,257	243	242,500	242	242,742	243	242,985	243	243,228	244

Błąd przybliżeń podanych na str. 158 i 159 jest nie większy niż 0,0005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,000531 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
149,157	149	149,306	150	149,456	149	149,605	150	149,755	150	5,00
150,656	151	150,807	151	150,958	151	151,109	151	151,260	151	5,01
152,170	153	152,323	152	152,475	152	152,627	153	152,780	153	5,02
153,700	153	153,853	154	154,007	154	154,161	155	154,316	154	5,03
155,244	156	155,400	155	155,555	156	155,711	156	155,867	155	5,04
156,805	156	156,961	157	157,118	158	157,276	157	157,433	158	5,05
158,380	159	158,539	159	158,698	158	158,856	159	159,015	159	5,06
159,972	160	160,132	160	160,292	161	160,453	160	160,613	161	5,07
161,580	162	161,742	161	161,903	162	162,065	163	162,228	162	5,08
163,204	163	163,367	164	163,531	163	163,694	164	163,858	164	5,09
164,844	165	165,009	165	165,174	165	165,339	166	165,505	165	5,10
166,501	166	166,667	167	166,834	167	167,001	167	167,168	167	5,11
168,174	168	168,342	169	168,511	168	168,679	169	168,848	169	5,12
169,864	170	170,034	170	170,204	171	170,375	170	170,545	171	5,13
171,571	172	171,743	172	171,915	172	172,087	172	172,259	172	5,14
173,296	173	173,469	174	173,643	173	173,816	174	173,990	174	5,15
175,037	176	175,213	175	175,388	175	175,563	176	175,739	176	5,16
176,797	176	176,973	178	177,151	177	177,328	177	177,505	178	5,17
178,573	179	178,752	179	178,931	179	179,110	179	179,289	180	5,18
180,368	181	180,549	180	180,729	181	180,910	181	181,091	181	5,19
182,181	182	182,363	183	182,546	182	182,728	183	182,911	183	5,20
184,012	184	184,196	184	184,380	185	184,565	184	184,749	185	5,21
185,861	186	186,047	186	186,233	187	186,420	186	186,606	187	5,22
187,729	188	187,917	188	188,105	188	188,293	189	188,482	188	5,23
189,616	190	189,806	189	189,995	191	190,186	190	190,376	190	5,24
191,521	192	191,713	192	191,905	192	192,097	192	192,289	192	5,25
193,446	194	193,640	194	193,834	194	194,028	194	194,222	194	5,26
195,390	196	195,586	196	195,782	196	195,978	196	196,174	196	5,27
197,354	198	197,552	197	197,749	198	197,947	198	198,145	198	5,28
199,338	199	199,537	200	199,737	200	199,937	200	200,137	200	5,29
201,341	201	201,542	202	201,744	202	201,946	202	202,148	202	5,30
203,365	203	203,568	204	203,772	204	203,976	204	204,180	204	5,31
205,408	206	205,614	206	205,820	206	206,026	206	206,232	206	5,32
207,473	207	207,680	208	207,888	208	208,096	208	208,304	209	5,33
209,558	210	209,768	209	209,977	211	210,188	210	210,398	210	5,34
211,664	212	211,876	212	212,088	212	212,300	212	212,512	213	5,35
213,791	214	214,005	214	214,219	215	214,434	214	214,648	215	5,36
215,940	216	216,156	216	216,372	217	216,589	216	216,805	217	5,37
218,110	218	218,328	219	218,547	218	218,765	219	218,984	219	5,38
220,302	221	220,523	220	220,743	221	220,964	221	221,185	221	5,39
222,516	223	222,739	223	222,962	223	223,185	223	223,408	224	5,40
224,753	224	224,977	226	225,203	225	225,428	225	225,653	226	5,41
227,011	227	227,238	228	227,466	227	227,693	228	227,921	228	5,42
229,293	229	229,522	230	229,752	230	229,982	230	230,212	230	5,43
231,597	232	231,829	232	232,061	232	232,293	233	232,526	232	5,44
233,925	234	234,159	234	234,393	235	234,628	234	234,862	235	5,45
236,276	236	236,512	237	236,749	237	236,986	237	237,223	237	5,46
238,650	239	238,889	239	239,128	239	239,367	240	239,607	240	5,47
241,049	241	241,290	242	241,532	241	241,773	242	242,015	242	5,48
243,472	243	243,715	244	243,959	244	244,203	244	244,447	245	5,49

The error of the approximations given on pp. 158 and 159 is not greater than 0,0005 and the error of an approximation obtained by linear interpolation is less than 0,000531 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
5,50	244,692	245	244,937	245	245,182	245	245,427	246	245,673	245
5,51	247,151	247	247,398	248	247,646	248	247,894	248	248,142	248
5,52	249,635	250	249,885	250	250,135	250	250,385	251	250,636	250
5,53	252,144	252	252,396	253	252,649	252	252,901	254	253,155	253
5,54	254,678	255	254,933	255	255,188	255	255,443	256	255,699	256
5,55	257,238	257	257,495	258	257,753	257	258,010	259	258,269	258
5,56	259,823	260	260,083	260	260,343	260	260,603	261	260,864	261
5,57	262,434	263	262,697	262	262,959	264	263,223	263	263,486	264
5,58	265,072	265	265,337	265	265,602	266	265,868	266	266,134	266
5,59	267,736	267	268,003	269	268,272	268	268,540	269	268,809	269
5,60	270,426	271	270,697	271	270,968	271	271,239	271	271,510	272
5,61	273,144	274	273,418	273	273,691	274	273,965	274	274,239	274
5,62	275,889	276	276,165	277	276,442	276	276,718	277	276,995	277
5,63	278,662	279	278,941	279	279,220	279	279,499	280	279,779	280
5,64	281,463	281	281,744	282	282,026	282	282,308	283	282,591	283
5,65	284,291	285	284,576	285	284,861	285	285,146	285	285,431	285
5,66	287,149	287	287,436	288	287,724	287	288,011	289	288,300	288
5,67	290,035	290	290,325	290	290,615	291	290,906	291	291,197	291
5,68	292,949	294	293,243	293	293,536	294	293,830	294	294,124	294
5,69	295,894	296	296,190	296	296,486	297	296,783	297	297,080	297
5,70	298,867	299	299,166	300	299,466	299	299,765	300	300,065	300
5,71	301,871	302	302,173	302	302,475	303	302,778	303	303,081	303
5,72	304,905	305	305,210	305	305,515	306	305,821	306	306,127	306
5,73	307,969	308	308,277	309	308,586	309	308,895	309	309,204	309
5,74	311,064	312	311,376	311	311,687	312	311,999	312	312,311	313
5,75	314,191	314	314,505	315	314,820	315	315,135	315	315,450	316
5,76	317,348	318	317,666	318	317,984	318	318,302	318	318,620	319
5,77	320,538	320	320,858	321	321,179	322	321,501	321	321,822	322
5,78	323,759	324	324,083	324	324,407	325	324,732	325	325,057	325
5,79	327,013	327	327,340	328	327,668	328	327,996	328	328,324	328
5,80	330,300	330	330,630	331	330,961	331	331,292	331	331,623	332
5,81	333,619	334	333,953	334	334,287	334	334,621	335	334,956	335
5,82	336,972	337	337,309	338	337,647	337	337,984	339	338,323	338
5,83	340,359	340	340,699	341	341,040	341	341,381	342	341,723	342
5,84	343,779	344	344,123	345	344,468	344	344,812	345	345,157	346
5,85	347,234	348	347,582	348	347,930	348	348,278	348	348,626	349
5,86	350,724	351	351,075	351	351,426	352	351,778	352	352,130	352
5,87	354,249	354	354,603	355	354,958	355	355,313	356	355,669	356
5,88	357,809	358	358,167	359	358,526	358	358,884	359	359,243	360
5,89	361,405	362	361,767	362	362,129	362	362,491	363	362,854	363
5,90	365,037	366	365,403	365	365,768	366	366,134	367	366,501	366
5,91	368,706	369	369,075	369	369,444	370	369,814	370	370,184	370
5,92	372,412	372	372,784	373	373,157	374	373,531	373	373,904	374
5,93	376,155	376	376,531	377	376,908	377	377,285	377	377,662	378
5,94	379,935	380	380,315	381	380,696	380	381,076	382	381,458	381
5,95	383,753	384	384,137	385	384,522	384	384,906	385	385,291	386
5,96	387,610	388	387,998	388	388,386	389	388,775	389	389,164	389
5,97	391,506	391	391,897	392	392,289	393	392,682	393	393,075	393
5,98	395,440	396	395,836	396	396,232	396	396,628	397	397,025	398
5,99	399,415	399	399,814	400	400,214	401	400,615	400	401,015	402

Błąd przybliżeń podanych na str. 160 i 161 jest nie większy niż 0,0005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,000551 + błąd zaokrąglania wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
245,918	246	246,164	247	246,411	246	246,657	247	246,904	247	5,50
248,390	248	248,638	249	248,887	249	249,136	250	249,386	249	5,51
250,886	251	251,137	252	251,389	251	251,640	252	251,892	252	5,52
253,408	253	253,661	254	253,915	254	254,169	254	254,423	255	5,53
255,955	256	256,211	256	256,467	257	256,724	256	256,980	258	5,54
258,527	259	258,786	259	259,045	259	259,304	259	259,563	260	5,55
261,125	261	261,386	262	261,648	262	261,910	262	262,172	262	5,56
263,750	263	264,013	265	264,278	264	264,542	265	264,807	265	5,57
266,400	267	266,667	267	266,934	267	267,201	267	267,468	268	5,58
269,078	269	269,347	269	269,616	270	269,886	270	270,156	270	5,59
271,782	272	272,054	272	272,326	272	272,598	273	272,871	273	5,60
274,513	275	274,788	275	275,063	275	275,338	276	275,614	275	5,61
277,272	278	277,550	277	277,827	278	278,105	279	278,384	278	5,62
280,059	280	280,339	281	280,620	280	280,900	281	281,181	282	5,63
282,874	283	283,157	283	283,440	283	283,723	284	284,007	284	5,64
285,716	286	286,002	286	286,288	287	286,575	287	286,862	287	5,65
288,588	289	288,877	289	289,166	289	289,455	290	289,745	290	5,66
291,488	292	291,780	292	292,072	292	292,364	293	292,657	292	5,67
294,418	294	294,712	295	295,007	295	295,302	296	295,598	296	5,68
297,377	297	297,674	298	297,972	298	298,270	299	298,569	298	5,69
300,365	301	300,666	301	300,967	301	301,268	301	301,569	302	5,70
303,384	304	303,688	304	303,992	304	304,296	304	304,600	305	5,71
306,433	307	306,740	307	307,047	307	307,354	307	307,661	308	5,72
309,513	310	309,823	310	310,133	310	310,443	311	310,754	310	5,73
312,624	312	312,936	314	313,250	313	313,563	314	313,877	314	5,74
315,766	315	316,081	317	316,398	316	316,714	317	317,031	317	5,75
318,939	319	319,258	320	319,578	319	319,897	320	320,217	321	5,76
322,144	323	322,467	322	322,789	323	323,112	324	323,436	323	5,77
325,382	326	325,708	325	326,033	327	326,360	326	326,686	327	5,78
328,652	329	328,981	329	329,310	330	329,640	329	329,969	331	5,79
331,955	332	332,287	333	332,620	333	332,953	333	333,286	333	5,80
335,291	336	335,627	336	335,963	336	336,299	336	336,635	337	5,81
338,661	339	339,000	339	339,339	340	339,679	339	340,018	341	5,82
342,065	342	342,407	343	342,750	342	343,092	344	343,436	343	5,83
345,503	345	345,848	346	346,194	347	346,541	346	346,887	347	5,84
348,975	349	349,324	350	349,674	349	350,023	351	350,374	350	5,85
352,482	353	352,835	353	353,188	353	353,541	354	353,895	354	5,86
356,025	356	356,381	356	356,737	357	357,094	358	357,452	357	5,87
359,603	360	359,963	360	360,323	360	360,683	361	361,044	361	5,88
363,217	363	363,580	364	363,944	364	364,308	365	364,673	364	5,89
366,867	367	367,234	368	367,602	367	367,969	369	368,338	368	5,90
370,554	371	370,925	371	371,296	372	371,668	371	372,039	373	5,91
374,278	375	374,653	375	375,028	375	375,403	376	375,779	376	5,92
378,040	378	378,418	379	378,797	379	379,176	379	379,555	380	5,93
381,839	382	382,221	383	382,604	383	382,987	383	383,370	383	5,94
385,677	386	386,063	386	386,449	387	386,836	387	387,223	387	5,95
389,553	390	389,943	390	390,333	390	390,723	391	391,114	392	5,96
393,468	394	393,862	394	394,256	394	394,650	395	395,045	395	5,97
397,423	397	397,820	398	398,218	399	398,617	398	399,015	400	5,98
401,417	401	401,818	402	402,220	403	402,623	403	403,026	403	5,99

The error of the approximations given on pp. 160 and 161 is not greater than 0,0005 and the error of an approximation obtained by linear interpolation is less than 0,000551 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
6,00	403,429	403	403,832	404	404,236	405	404,641	405	405,046	405
6,01	407,483	408	407,891	408	408,299	409	408,708	409	409,117	409
6,02	411,579	411	411,990	413	412,403	412	412,815	413	413,228	414
6,03	415,715	416	416,131	416	416,547	417	416,964	417	417,381	418
6,04	419,893	420	420,313	421	420,734	421	421,155	421	421,576	422
6,05	424,113	424	424,537	425	424,962	425	425,387	426	425,813	426
6,06	428,375	429	428,804	429	429,233	429	429,662	430	430,092	431
6,07	432,681	433	433,114	433	433,547	434	433,981	434	434,415	435
6,08	437,029	437	437,466	438	437,904	438	438,342	439	438,781	439
6,09	441,421	442	441,863	442	442,305	443	442,748	443	443,191	443
6,10	445,858	446	446,304	446	446,750	447	447,197	448	447,645	448
6,11	450,339	450	450,789	451	451,240	452	451,692	452	452,144	452
6,12	454,865	455	455,320	455	455,775	456	456,231	457	456,688	457
6,13	459,436	460	459,896	460	460,356	461	460,817	461	461,278	461
6,14	464,054	464	464,518	465	464,983	465	465,448	466	465,914	466
6,15	468,717	469	469,186	470	469,656	470	470,126	470	470,596	471
6,16	473,428	474	473,902	474	474,376	474	474,850	476	475,326	475
6,17	478,186	479	478,665	478	479,143	480	479,623	480	480,103	480
6,18	482,992	483	483,475	484	483,959	484	484,443	485	484,928	485
6,19	487,846	488	488,334	489	488,823	489	489,312	489	489,801	490
6,20	492,749	493	493,242	494	493,736	494	494,230	494	494,724	495
6,21	497,701	498	498,199	499	498,698	499	499,197	499	499,696	500
6,22	502,703	503	503,206	504	503,710	504	504,214	504	504,718	505
6,23	507,755	508	508,263	509	508,772	509	509,281	510	509,791	510
6,24	512,859	513	513,372	513	513,885	514	514,399	515	514,914	515
6,25	518,013	518	518,531	519	519,050	519	519,569	520	520,089	520
6,26	523,219	523	523,742	524	524,266	525	524,791	525	525,316	526
6,27	528,477	529	529,006	529	529,535	530	530,065	531	530,596	530
6,28	533,789	534	534,323	534	534,857	535	535,392	536	535,928	536
6,29	539,153	540	539,693	540	540,233	540	540,773	541	541,314	542
6,30	544,572	545	545,117	545	545,662	546	546,208	547	546,755	547
6,31	550,045	550	550,595	551	551,146	552	551,698	552	552,250	552
6,32	555,573	556	556,129	556	556,685	557	557,242	558	557,800	558
6,33	561,157	561	561,718	562	562,280	563	562,843	563	563,406	563
6,34	566,796	567	567,363	568	567,931	568	568,499	569	569,068	569
6,35	572,493	572	573,065	574	573,639	574	574,213	574	574,787	575
6,36	578,246	579	578,825	579	579,404	580	579,984	580	580,564	581
6,37	584,058	584	584,642	585	585,227	586	585,813	586	586,399	586
6,38	589,928	590	590,518	591	591,109	591	591,700	592	592,292	593
6,39	595,857	596	596,453	596	597,049	598	597,647	598	598,245	598
6,40	601,845	602	602,447	603	603,050	603	603,653	604	604,257	605
6,41	607,894	608	608,502	609	609,111	609	609,720	610	610,330	611
6,42	614,003	614	614,617	615	615,232	616	615,848	616	616,464	617
6,43	620,174	620	620,794	622	621,416	621	622,037	623	622,660	623
6,44	626,407	627	627,034	627	627,661	628	628,289	628	628,917	630
6,45	632,702	633	633,335	634	633,969	634	634,603	635	635,238	636
6,46	639,061	639	639,700	640	640,340	641	640,981	641	641,622	642
6,47	645,484	646	646,130	646	646,776	647	647,423	648	648,071	648
6,48	651,971	652	652,623	653	653,276	654	653,930	654	654,584	655
6,49	658,523	659	659,182	660	659,842	660	660,502	661	661,163	661

Błąd przybliżeń podanych na str. 162 i 163 jest nie większy niż 0,0005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,000584 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
405,451	406	405,857	406	406,263	406	406,669	407	407,076	407	6,00
409,526	410	409,936	410	410,346	410	410,756	411	411,167	412	6,01
413,642	413	414,055	415	414,470	414	414,884	416	415,300	415	6,02
417,799	418	418,217	418	418,635	419	419,054	419	419,473	420	6,03
421,998	422	422,420	423	422,843	423	423,266	423	423,689	424	6,04
426,239	426	426,665	427	427,092	428	427,520	427	427,947	428	6,05
430,523	430	430,953	432	431,385	431	431,816	432	432,248	433	6,06
434,850	435	435,285	435	435,720	436	436,156	436	436,592	437	6,07
439,220	439	439,659	440	440,099	440	440,539	441	440,980	441	6,08
443,634	444	444,078	444	444,522	445	444,967	445	445,412	446	6,09
448,093	449	448,541	449	448,990	449	449,439	450	449,889	450	6,10
452,596	453	453,049	453	453,502	454	453,956	454	454,410	455	6,11
457,145	457	457,602	458	458,060	458	458,518	459	458,977	459	6,12
461,739	462	462,201	462	462,663	463	463,126	464	463,590	464	6,13
466,380	466	466,846	467	467,313	468	467,781	468	468,249	468	6,14
471,067	471	471,538	472	472,010	472	472,482	473	472,955	473	6,15
475,801	476	476,277	477	476,754	477	477,231	477	477,708	478	6,16
480,583	481	481,064	481	481,545	482	482,027	482	482,509	483	6,17
485,413	486	485,899	486	486,385	486	486,871	488	487,359	487	6,18
490,291	491	490,782	491	491,273	492	491,765	492	492,257	492	6,19
495,219	495	495,714	496	496,210	497	496,707	497	497,204	497	6,20
500,196	500	500,696	501	501,197	502	501,699	502	502,201	502	6,21
505,223	506	505,729	505	506,234	507	506,741	507	507,248	507	6,22
510,301	510	510,811	511	511,322	512	511,834	512	512,346	513	6,23
515,429	516	515,945	516	516,461	517	516,978	517	517,495	518	6,24
520,609	521	521,130	522	521,652	522	522,174	522	522,696	523	6,25
525,842	526	526,368	526	526,894	527	527,421	528	527,949	528	6,26
531,126	532	531,658	532	532,190	532	532,722	533	533,255	534	6,27
536,464	537	537,001	537	537,538	538	538,076	538	538,614	539	6,28
541,856	542	542,398	543	542,941	543	543,484	544	544,028	544	6,29
547,302	547	547,849	548	548,397	549	548,946	549	549,495	550	6,30
552,802	553	553,355	554	553,909	554	554,463	555	555,018	555	6,31
558,398	558	558,916	560	559,476	559	560,035	561	560,596	561	6,32
563,969	565	564,534	564	565,098	566	565,664	566	566,230	566	6,33
569,637	570	570,207	571	570,778	571	571,349	572	571,921	572	6,34
575,362	576	575,938	576	576,514	577	577,091	577	577,668	578	6,35
581,145	581	581,726	582	582,308	583	582,891	583	583,474	584	6,36
586,985	588	587,573	588	588,161	588	588,749	589	589,338	590	6,37
592,885	593	593,478	594	594,072	594	594,666	595	595,261	596	6,38
598,843	599	599,442	600	600,042	601	600,643	600	601,243	602	6,39
604,862	605	605,467	606	606,073	606	606,679	607	607,286	608	6,40
610,941	611	611,552	612	612,164	612	612,776	613	613,389	614	6,41
617,081	617	617,698	618	618,316	619	618,935	619	619,554	620	6,42
623,283	623	623,906	624	624,530	625	625,155	626	625,781	626	6,43
629,547	630	630,177	630	630,807	631	631,438	632	632,070	632	6,44
635,874	636	636,510	637	637,147	637	637,784	638	638,422	639	6,45
642,264	643	642,907	643	643,550	644	644,194	645	644,839	645	6,46
648,719	649	649,368	650	650,018	650	650,668	651	651,319	652	6,47
655,239	656	655,895	656	656,551	657	657,208	657	657,865	658	6,48
661,824	662	662,486	663	663,149	664	663,813	664	664,477	665	6,49

The error of the approximations given on pp. 162 and 163 is not greater than 0,0005 and the error of an approximation obtained by linear interpolation is less than 0,000584 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
6,50	665,142	665	665,807	666	666,473	667	667,140	668	667,808	668
6,51	671,826	673	672,499	672	673,171	674	673,845	674	674,519	675
6,52	678,578	679	679,257	680	679,937	680	680,617	681	681,298	682
6,53	685,398	686	686,084	686	686,770	687	687,457	688	688,145	689
6,54	692,287	692	692,979	694	693,673	694	694,367	694	695,061	696
6,55	699,244	700	699,944	700	700,644	701	701,345	702	702,047	702
6,56	706,272	706	706,978	708	707,686	708	708,394	708	709,102	710
6,57	713,370	714	714,084	714	714,798	715	715,513	716	716,229	717
6,58	720,539	721	721,260	722	721,982	722	722,704	723	723,427	724
6,59	727,781	728	728,509	729	729,238	729	729,967	731	730,698	731
6,60	735,095	736	735,831	736	736,567	737	737,304	737	738,041	739
6,61	742,483	743	743,226	743	743,969	745	744,714	745	745,459	746
6,62	749,945	750	750,695	751	751,446	752	752,198	753	752,951	753
6,63	757,482	758	758,240	759	758,999	759	759,758	760	760,518	761
6,64	765,095	765	765,860	767	766,627	767	767,394	768	768,162	768
6,65	772,784	773	773,557	774	774,331	775	775,106	776	775,882	776
6,66	780,551	781	781,332	782	782,114	782	782,896	783	783,679	784
6,67	788,396	788	789,184	790	789,974	790	790,764	792	791,556	791
6,68	796,319	797	797,116	797	797,913	799	798,712	799	799,511	800
6,69	804,322	805	805,127	806	805,933	806	806,739	807	807,546	808
6,70	812,406	813	813,219	813	814,032	815	814,847	815	815,662	816
6,71	820,571	821	821,392	821	822,213	823	823,036	823	823,859	825
6,72	828,818	829	829,647	830	830,477	831	831,308	831	832,139	833
6,73	837,147	838	837,985	838	838,823	839	839,662	841	840,503	840
6,74	845,561	846	846,407	847	847,254	847	848,101	849	848,950	849
6,75	854,059	854	854,913	856	855,769	856	856,625	857	857,482	858
6,76	862,642	863	863,505	864	864,369	865	865,234	866	866,100	866
6,77	871,312	872	872,184	872	873,056	874	873,930	874	874,804	875
6,78	880,069	880	880,949	882	881,831	882	882,713	883	883,596	884
6,79	888,914	889	889,803	890	890,693	891	891,584	892	892,476	893
6,80	897,847	899	898,746	899	899,645	900	900,545	901	901,446	902
6,81	906,871	907	907,778	908	908,686	910	909,596	910	910,506	911
6,82	915,985	916	916,901	918	917,819	918	918,737	919	919,656	920
6,83	925,191	925	926,116	927	927,043	928	927,971	928	928,899	929
6,84	934,489	935	935,424	936	936,360	937	937,297	938	938,235	938
6,85	943,881	944	944,825	946	945,771	946	946,717	947	947,664	948
6,86	953,367	954	954,321	955	955,276	955	956,231	957	957,188	958
6,87	962,949	963	963,912	964	964,876	966	965,842	966	966,808	967
6,88	972,626	973	973,599	975	974,574	975	975,549	976	976,525	977
6,89	982,401	983	983,384	984	984,368	985	985,353	986	986,339	987
6,90	992,275	992	993,267	994	994,261	995	995,256	996	996,252	997
6,90										
6,91	1002,25	100	1003,25	100	1004,25	101	1005,26	100	1006,26	101
6,92	1012,32	101	1013,33	102	1014,35	101	1015,36	102	1016,38	101
6,93	1022,49	103	1023,52	102	1024,54	103	1025,57	102	1026,59	103
6,94	1032,77	103	1033,80	104	1034,84	103	1035,87	104	1036,91	104
6,95	1043,15	104	1044,19	105	1045,24	104	1046,28	105	1047,33	105
6,96	1053,63	106	1054,69	105	1055,74	106	1056,80	106	1057,86	105
6,97	1064,22	107	1065,29	106	1066,35	107	1067,42	107	1068,49	107
6,98	1074,92	107	1075,99	108	1077,07	108	1078,15	108	1079,23	108
6,99	1085,72	109	1086,81	109	1087,90	108	1088,98	109	1090,07	109

Błąd przybliżeń podanych na str. 164 i 165 jest dla $6,500 \leq x < 6,908$ nie większy niż 0,0005, a dla $6,908 \leq x < 7,000$ nie większy niż 0,005. Błąd przybliżenia otrzymanego przez interpolację liniową jest dla $6,500 < x < 6,908$ mniejszy niż 0,000626 + błąd zaokrąglenia wyniku, a dla $6,908 < x < 7,000$ mniejszy niż 0,00514 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
668,476	668	669,144	670	669,814	670	670,484	671	671,155	671	6,50
675,194	675	675,869	677	676,546	677	677,223	677	677,900	678	6,51
681,980	682	682,662	683	683,345	684	684,029	684	684,713	685	6,52
688,834	689	689,523	690	690,213	690	690,903	692	691,595	692	6,53
695,757	696	696,453	697	697,150	697	697,847	698	698,545	699	6,54
702,749	703	703,452	704	704,156	705	704,861	705	705,566	706	6,55
709,812	710	710,522	711	711,233	712	711,945	712	712,657	713	6,56
716,946	717	717,663	718	718,381	719	719,100	719	719,819	720	6,57
724,151	725	724,876	725	725,601	726	726,327	726	727,053	728	6,58
731,429	732	732,161	732	732,893	733	733,626	734	734,360	735	6,59
738,780	739	739,519	740	740,259	741	741,000	741	741,741	742	6,60
746,205	746	746,951	748	747,699	748	748,447	749	749,196	749	6,61
753,704	754	754,458	755	755,213	756	755,969	756	756,725	757	6,62
761,279	762	762,041	762	762,803	763	763,566	764	764,330	765	6,63
768,930	769	769,699	770	770,469	771	771,240	772	772,012	772	6,64
776,658	777	777,435	778	778,213	778	778,991	780	779,771	780	6,65
784,463	785	785,248	786	786,034	786	786,820	788	787,608	788	6,66
792,347	793	793,140	794	793,934	794	794,728	795	795,523	796	6,67
800,311	800	801,111	802	801,913	802	802,715	803	803,518	804	6,68
808,354	809	809,163	809	809,972	811	810,783	811	811,594	812	6,69
816,478	817	817,295	818	818,113	818	818,931	819	819,750	821	6,70
824,684	825	825,509	826	826,335	827	827,162	827	827,989	829	6,71
832,972	833	833,805	835	834,640	835	835,475	836	836,311	836	6,72
841,343	842	842,185	843	843,028	843	843,871	845	844,716	845	6,73
849,799	850	850,649	851	851,500	852	852,352	853	853,205	854	6,74
858,340	859	859,199	859	860,058	861	860,919	861	861,780	862	6,75
866,966	868	867,834	868	868,702	869	869,571	870	870,441	871	6,76
875,679	876	876,555	877	877,432	878	878,310	879	879,189	880	6,77
884,480	885	885,365	886	886,251	887	887,138	887	888,025	889	6,78
893,369	894	894,263	895	895,158	895	896,053	897	896,950	897	6,79
902,348	903	903,251	903	904,154	905	905,059	905	905,964	907	6,80
911,417	911	912,328	913	913,241	914	914,155	914	915,069	916	6,81
920,576	921	921,497	922	922,419	923	923,342	924	924,266	925	6,82
929,828	931	930,759	931	931,690	932	932,622	933	933,555	934	6,83
939,173	940	940,113	941	941,054	941	941,995	942	942,937	944	6,84
948,612	949	949,561	950	950,511	951	951,462	952	952,414	953	6,85
958,146	958	959,104	960	960,064	961	961,025	961	961,986	963	6,86
967,775	969	968,744	969	969,713	970	970,683	971	971,654	972	6,87
977,502	978	978,480	979	979,459	980	980,439	981	981,420	981	6,88
987,326	988	988,314	988	989,302	990	990,292	991	991,283	992	6,89
997,249	997	998,246	999	999,245	1000					6,90
						1000,24	101	1001,25	100	6,90
1007,27	101	1008,28	101	1009,29	101	1010,30	101	1011,31	101	6,91
1017,39	102	1018,41	102	1019,43	102	1020,45	102	1021,47	102	6,92
1027,62	103	1028,65	103	1029,68	103	1030,71	103	1031,74	103	6,93
1037,95	104	1038,99	103	1040,02	105	1041,07	104	1042,11	104	6,94
1048,38	105	1049,43	105	1050,48	105	1051,53	105	1052,58	105	6,95
1058,91	106	1059,97	106	1061,03	107	1062,10	106	1063,16	106	6,96
1069,56	107	1070,63	107	1071,70	107	1072,77	107	1073,84	108	6,97
1080,31	108	1081,39	108	1082,47	108	1083,55	109	1084,64	108	6,98
1091,16	110	1092,26	109	1093,35	109	1094,44	110	1095,54	109	6,99

The error of the approximations given on pp. 164 and 165 is not greater than 0,0005 for $6,500 < x < 6,908$ and not greater than 0,005 for $6,908 < x < 7,000$. The error of an approximation obtained by linear interpolation for $6,500 < x < 6,908$ is less than $0,000626 +$ the error of rounding off the result and for $6,908 < x < 7,000$ less than $0,00514 +$ the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
7,00	1096,63	110	1097,73	110	1098,83	110	1099,93	110	1101,03	110
7,01	1107,65	111	1108,76	111	1109,87	111	1110,98	111	1112,09	112
7,02	1118,79	112	1119,91	112	1121,03	112	1122,15	112	1123,27	112
7,03	1130,03	113	1131,16	113	1132,29	114	1133,43	113	1134,56	113
7,04	1141,39	114	1142,53	114	1143,67	115	1144,82	114	1145,96	115
7,05	1152,86	115	1154,01	116	1155,17	115	1156,32	116	1157,48	116
7,06	1164,45	116	1165,61	117	1166,78	116	1167,94	117	1169,11	117
7,07	1176,15	117	1177,32	118	1178,50	118	1179,68	118	1180,86	118
7,08	1187,97	119	1189,16	119	1190,35	119	1191,54	119	1192,73	119
7,09	1199,91	120	1201,11	120	1202,31	120	1203,51	121	1204,72	120
7,10	1211,97	121	1213,18	121	1214,39	122	1215,61	121	1216,82	122
7,11	1224,15	122	1225,37	123	1226,60	123	1227,83	122	1229,05	123
7,12	1236,45	124	1237,69	124	1238,93	124	1240,17	124	1241,41	124
7,13	1248,88	125	1250,13	125	1251,38	125	1252,63	125	1253,88	126
7,14	1261,43	126	1262,69	126	1263,95	127	1265,22	126	1266,48	127
7,15	1274,11	127	1275,38	128	1276,66	127	1277,93	128	1279,21	128
7,16	1286,91	129	1288,20	129	1289,49	129	1290,78	129	1292,07	129
7,17	1299,84	131	1301,15	130	1302,45	130	1303,75	130	1305,05	131
7,18	1312,91	131	1314,22	132	1315,54	131	1316,85	132	1318,17	132
7,19	1326,10	133	1327,43	133	1328,76	133	1330,09	133	1331,42	133
7,20	1339,43	134	1340,77	134	1342,11	135	1343,46	134	1344,80	134
7,21	1352,89	136	1354,25	135	1355,60	136	1356,96	135	1358,31	136
7,22	1366,49	137	1367,86	136	1369,22	137	1370,59	138	1371,97	137
7,23	1380,22	138	1381,60	139	1382,99	138	1384,37	139	1385,75	139
7,24	1394,09	140	1395,49	139	1396,88	140	1398,28	140	1399,68	140
7,25	1408,10	141	1409,51	141	1410,92	142	1412,34	141	1413,75	141
7,26	1422,26	142	1423,68	142	1425,10	143	1426,53	143	1427,96	143
7,27	1436,55	144	1437,99	144	1439,43	144	1440,87	144	1442,31	144
7,28	1450,99	145	1452,44	145	1453,89	146	1455,35	145	1456,80	146
7,29	1465,57	147	1467,04	146	1468,50	147	1469,97	147	1471,44	148
7,30	1480,30	148	1481,78	148	1483,26	149	1484,75	148	1486,23	149
7,31	1495,18	149	1496,67	150	1498,17	150	1499,67	150	1501,17	150
7,32	1510,20	151	1511,71	152	1513,23	151	1514,74	152	1516,26	151
7,33	1525,38	153	1526,91	153	1528,44	152	1529,96	154	1531,50	153
7,34	1540,71	154	1542,25	155	1543,80	154	1545,34	155	1546,89	154
7,35	1556,20	155	1557,75	156	1559,31	156	1560,87	156	1562,43	157
7,36	1571,84	157	1573,41	157	1574,98	158	1576,56	158	1578,14	158
7,37	1587,63	159	1589,22	159	1590,81	159	1592,40	160	1594,00	159
7,38	1603,59	160	1605,19	161	1606,80	161	1608,41	161	1610,02	161
7,39	1619,71	162	1621,33	162	1622,95	162	1624,57	163	1626,20	162
7,40	1635,98	164	1637,62	164	1639,26	164	1640,90	164	1642,54	164
7,41	1652,43	165	1654,08	165	1655,73	166	1657,39	166	1659,05	166
7,42	1669,03	167	1670,70	167	1672,37	168	1674,05	167	1675,72	168
7,43	1685,81	168	1687,49	169	1689,18	169	1690,87	169	1692,56	170
7,44	1702,75	170	1704,45	171	1706,16	171	1707,87	170	1709,57	172
7,45	1719,86	172	1721,58	173	1723,31	172	1725,03	173	1726,76	172
7,46	1737,15	174	1738,89	174	1740,63	174	1742,37	174	1744,11	175
7,47	1754,61	175	1756,36	176	1758,12	176	1759,88	176	1761,64	176
7,48	1772,24	177	1774,01	178	1775,79	178	1777,57	177	1779,34	178
7,49	1790,05	179	1791,84	180	1793,64	179	1795,43	180	1797,23	179

Błąd przybliżeń podanych na str. 166 i 167 jest nie większy niż 0,005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,00523 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
1102,13	110	1103,23	111	1104,34	110	1105,44	111	1106,55	110	7,00
1113,21	111	1114,32	112	1115,44	111	1116,55	112	1117,67	112	7,01
1124,39	113	1125,52	113	1126,65	112	1127,77	113	1128,90	113	7,02
1135,69	114	1136,83	114	1137,97	114	1139,11	114	1140,25	114	7,03
1147,11	115	1148,26	115	1149,41	115	1150,56	115	1151,71	115	7,04
1158,64	116	1159,80	116	1160,96	116	1162,12	116	1163,28	117	7,05
1170,28	117	1171,45	117	1172,62	118	1173,80	117	1174,97	118	7,06
1182,04	119	1183,23	118	1184,41	118	1185,59	119	1186,78	119	7,07
1193,92	120	1195,12	119	1196,31	120	1197,51	120	1198,71	120	7,08
1205,92	121	1207,13	121	1208,34	121	1209,55	121	1210,76	121	7,09
1218,04	122	1219,26	122	1220,48	122	1221,70	122	1222,92	123	7,10
1230,28	123	1231,51	124	1232,75	123	1233,98	123	1235,21	124	7,11
1242,65	124	1243,89	125	1245,14	124	1246,38	125	1247,63	125	7,12
1255,14	125	1256,39	126	1257,65	126	1258,91	126	1260,17	126	7,13
1267,75	127	1269,02	127	1270,29	127	1271,56	127	1272,83	128	7,14
1280,49	128	1281,77	129	1283,06	128	1284,34	128	1285,62	129	7,15
1293,36	130	1294,66	129	1295,95	130	1297,25	130	1298,55	129	7,16
1306,36	131	1307,67	131	1308,98	131	1310,29	131	1311,60	131	7,17
1319,49	132	1320,81	132	1322,13	132	1323,45	133	1324,78	132	7,18
1332,75	133	1334,08	134	1335,42	133	1336,75	134	1338,09	134	7,19
1346,14	135	1347,49	135	1348,84	135	1350,19	135	1351,54	135	7,20
1359,67	136	1361,03	137	1362,40	136	1363,76	136	1365,12	137	7,21
1373,34	137	1374,71	138	1376,09	137	1377,46	138	1378,84	138	7,22
1387,14	139	1388,53	139	1389,92	139	1391,31	139	1392,70	139	7,23
1401,08	140	1402,48	141	1403,89	140	1405,29	141	1406,70	140	7,24
1415,16	142	1416,58	142	1418,00	141	1419,41	142	1420,83	143	7,25
1429,39	143	1430,82	143	1432,25	143	1433,68	143	1435,11	144	7,26
1443,75	145	1445,20	144	1446,64	145	1448,09	145	1449,54	145	7,27
1458,26	146	1459,72	146	1461,18	146	1462,64	147	1464,11	146	7,28
1472,92	147	1474,39	148	1475,87	147	1477,34	148	1478,82	148	7,29
1487,72	149	1489,21	149	1490,70	149	1492,19	149	1493,68	150	7,30
1502,67	151	1504,18	150	1505,68	151	1507,19	150	1508,69	151	7,31
1517,77	152	1519,29	152	1520,81	152	1522,33	153	1523,86	152	7,32
1533,03	153	1534,56	154	1536,10	153	1537,63	154	1539,17	154	7,33
1548,43	155	1549,98	155	1551,53	156	1553,09	155	1554,64	156	7,34
1564,00	156	1565,56	157	1567,13	157	1568,70	157	1570,27	157	7,35
1579,72	158	1581,30	158	1582,88	158	1584,46	159	1586,05	158	7,36
1595,59	160	1597,19	160	1598,79	160	1600,39	160	1601,99	160	7,37
1611,63	161	1613,24	161	1614,85	162	1616,47	162	1618,09	162	7,38
1627,82	163	1629,45	163	1631,08	164	1632,72	163	1634,35	163	7,39
1644,18	165	1645,83	165	1647,48	164	1649,12	165	1650,77	166	7,40
1660,71	166	1662,37	166	1664,03	167	1665,70	167	1667,37	166	7,41
1677,40	168	1679,08	168	1680,76	168	1682,44	168	1684,12	169	7,42
1694,26	169	1695,95	170	1697,65	170	1699,35	170	1701,05	170	7,43
1711,29	171	1713,00	171	1714,71	172	1716,43	171	1718,14	172	7,44
1728,48	173	1730,21	173	1731,94	174	1733,68	173	1735,41	174	7,45
1745,86	174	1747,60	175	1749,35	175	1751,10	175	1752,85	176	7,46
1763,40	177	1765,17	176	1766,93	177	1768,70	177	1770,47	177	7,47
1781,12	179	1782,91	178	1784,69	179	1786,48	178	1788,26	179	7,48
1799,02	180	1800,82	181	1802,63	180	1804,43	181	1806,24	180	7,49

The error of the approximations given on pp. 166 and 167 is not greater than 0,005 and the error of an approximation obtained by linear interpolation is less than 0,00523 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
7,50	1808,04	181	1809,85	181	1811,66	181	1813,47	182	1815,29	182
7,51	1826,21	183	1828,04	183	1829,87	183	1831,70	183	1833,53	184
7,52	1844,57	184	1846,41	185	1848,26	185	1850,11	185	1851,96	185
7,53	1863,11	186	1864,97	187	1866,84	186	1868,70	187	1870,57	187
7,54	1881,83	188	1883,71	189	1885,60	188	1887,48	189	1889,37	189
7,55	1900,74	190	1902,64	191	1904,55	190	1906,45	191	1908,36	191
7,56	1919,85	192	1921,77	192	1923,69	192	1925,61	193	1927,54	193
7,57	1939,14	194	1941,08	194	1943,02	195	1944,97	194	1946,91	195
7,58	1958,63	196	1960,59	196	1962,55	196	1964,51	197	1966,48	197
7,59	1978,31	198	1980,29	198	1982,27	199	1984,26	198	1986,24	199
7,60	1998,20	200	2000,20	200	2002,20	200	2004,20	200	2006,20	201
7,61	2018,28	202	2020,30	202	2022,32	202	2024,34	203	2026,37	202
7,62	2038,56	204	2040,60	204	2042,64	205	2044,69	204	2046,73	205
7,63	2059,05	206	2061,11	206	2063,17	207	2065,24	206	2067,30	207
7,64	2079,74	208	2081,82	209	2083,91	208	2085,99	209	2088,08	209
7,65	2100,65	210	2102,75	210	2104,85	211	2106,96	210	2109,06	212
7,66	2121,76	212	2123,88	213	2126,01	212	2128,13	213	2130,26	213
7,67	2143,08	215	2145,23	214	2147,37	215	2149,52	215	2151,67	215
7,68	2164,62	217	2166,79	216	2168,95	217	2171,12	218	2173,30	217
7,69	2186,37	219	2188,56	219	2190,75	219	2192,94	220	2195,14	219
7,70	2208,35	221	2210,56	221	2212,77	221	2214,98	222	2217,20	222
7,71	2230,54	223	2232,77	224	2235,01	223	2237,24	224	2239,48	224
7,72	2252,96	225	2255,21	226	2257,47	226	2259,73	226	2261,99	226
7,73	2275,60	228	2277,88	228	2280,16	228	2282,44	228	2284,72	229
7,74	2298,47	230	2300,77	230	2303,07	231	2305,38	230	2307,68	231
7,75	2321,57	233	2323,90	232	2326,22	233	2328,55	233	2330,88	233
7,76	2344,90	235	2347,25	235	2349,60	235	2351,95	235	2354,30	236
7,77	2368,47	237	2370,84	237	2373,21	238	2375,59	237	2377,96	238
7,78	2392,27	240	2394,67	239	2397,06	240	2399,46	240	2401,86	241
7,79	2416,32	242	2418,74	242	2421,16	242	2423,58	242	2426,00	243
7,80	2440,60	244	2443,04	245	2445,49	244	2447,93	245	2450,38	246
7,81	2465,13	247	2467,60	247	2470,07	247	2472,54	247	2475,01	248
7,82	2489,91	249	2492,40	249	2494,89	250	2497,39	249	2499,88	251
7,83	2514,93	252	2517,45	251	2519,96	253	2522,49	252	2525,01	253
7,84	2540,20	255	2542,75	254	2545,29	255	2547,84	255	2550,39	255
7,85	2565,73	257	2568,30	257	2570,87	257	2573,44	258	2576,02	258
7,86	2591,52	259	2594,11	260	2596,71	260	2599,31	260	2601,91	260
7,87	2617,57	261	2620,18	263	2622,81	262	2625,43	263	2628,06	263
7,88	2643,87	265	2646,52	265	2649,17	265	2651,82	265	2654,47	266
7,89	2670,44	268	2673,12	267	2675,79	268	2678,47	268	2681,15	268
7,90	2697,28	270	2699,98	270	2702,68	271	2705,39	270	2708,09	271
7,91	2724,39	273	2727,12	272	2729,84	274	2732,58	273	2735,31	274
7,92	2751,77	275	2754,52	276	2757,28	276	2760,04	276	2762,80	276
7,93	2779,43	278	2782,21	278	2784,99	279	2787,78	279	2790,57	279
7,94	2807,36	281	2810,17	281	2812,98	282	2815,80	281	2818,61	282
7,95	2835,57	284	2838,41	284	2841,25	284	2844,09	285	2846,94	285
7,96	2864,07	287	2866,94	287	2869,81	287	2872,68	287	2875,55	288
7,97	2892,86	289	2895,75	290	2898,65	290	2901,55	290	2904,45	291
7,98	2921,93	292	2924,85	293	2927,78	293	2930,71	293	2933,64	294
7,99	2951,30	295	2954,25	296	2957,21	295	2960,16	297	2963,13	296

Błąd przybliżeń podanych na str. 168 i 169 jest nie większy niż 0,005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,00538 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
1817,11	181	1818,92	182	1820,74	182	1822,56	183	1824,39	182	7,50
1835,37	183	1837,20	184	1839,04	184	1840,88	184	1842,72	185	7,51
1853,81	186	1855,67	185	1857,52	186	1859,38	186	1861,24	187	7,52
1872,44	188	1874,32	187	1876,19	188	1878,07	188	1879,95	188	7,53
1891,26	189	1893,15	190	1895,05	190	1896,95	189	1898,84	190	7,54
1910,27	191	1912,18	191	1914,09	192	1916,01	192	1917,93	192	7,55
1929,47	193	1931,40	193	1933,33	194	1935,27	193	1937,20	194	7,56
1948,86	195	1950,81	195	1952,76	196	1954,72	195	1956,67	196	7,57
1968,45	197	1970,42	197	1972,39	197	1974,36	198	1976,34	197	7,58
1988,23	199	1990,22	199	1992,21	199	1994,20	200	1996,20	200	7,59
2008,21	201	2010,22	201	2012,23	202	2014,25	201	2016,26	202	7,60
2028,39	203	2030,42	204	2032,46	203	2034,49	203	2036,52	204	7,61
2048,78	205	2050,83	205	2052,88	206	2054,94	205	2056,99	206	7,62
2069,37	207	2071,44	207	2073,51	208	2075,59	208	2077,67	207	7,63
2090,17	209	2092,26	209	2094,35	210	2096,45	210	2098,55	210	7,64
2111,18	211	2113,29	211	2115,40	212	2117,52	212	2119,64	212	7,65
2132,39	214	2134,53	213	2136,66	214	2138,80	214	2140,94	214	7,66
2153,82	216	2155,98	216	2158,14	215	2160,29	217	2162,46	216	7,67
2175,47	218	2177,65	218	2179,83	218	2182,01	218	2184,19	218	7,68
2197,33	220	2199,53	220	2201,73	221	2203,94	220	2206,14	221	7,69
2219,42	222	2221,64	222	2223,86	223	2226,09	222	2228,31	223	7,70
2241,72	225	2243,97	224	2246,21	225	2248,46	225	2250,71	225	7,71
2264,25	227	2266,52	227	2268,79	227	2271,06	227	2273,33	227	7,72
2287,01	229	2289,30	229	2291,59	229	2293,88	230	2296,18	229	7,73
2309,99	231	2312,30	232	2314,62	231	2316,93	232	2319,25	232	7,74
2333,21	233	2335,54	234	2337,88	234	2340,22	234	2342,56	234	7,75
2356,66	236	2359,02	236	2361,38	236	2363,74	236	2366,10	237	7,76
2380,34	238	2382,72	239	2385,11	239	2387,50	238	2389,88	239	7,77
2404,27	240	2406,67	241	2409,08	241	2411,49	241	2413,90	242	7,78
2428,43	243	2430,86	243	2433,29	244	2435,73	243	2438,16	244	7,79
2452,84	245	2455,29	246	2457,75	246	2460,21	246	2462,67	246	7,80
2477,49	248	2479,97	248	2482,45	248	2484,93	249	2487,42	249	7,81
2502,39	250	2504,89	251	2507,40	250	2509,90	252	2512,42	251	7,82
2527,54	252	2530,06	254	2532,60	253	2535,13	254	2537,67	253	7,83
2552,94	255	2555,49	256	2558,05	256	2560,61	256	2563,17	256	7,84
2578,60	257	2581,17	259	2583,76	258	2586,34	259	2588,93	259	7,85
2604,51	261	2607,12	260	2609,72	262	2612,34	261	2614,95	262	7,86
2630,69	263	2633,32	263	2635,95	264	2638,59	264	2641,23	264	7,87
2657,13	265	2659,78	266	2662,44	267	2665,11	266	2667,77	267	7,88
2683,83	268	2686,51	269	2689,20	269	2691,89	270	2694,59	269	7,89
2710,80	271	2713,51	272	2716,23	272	2718,95	272	2721,67	272	7,90
2738,05	274	2740,79	274	2743,53	274	2746,27	275	2749,02	275	7,91
2765,56	277	2768,33	277	2771,10	277	2773,87	278	2776,65	278	7,92
2793,36	279	2796,15	280	2798,95	280	2801,75	280	2804,55	281	7,93
2821,43	283	2824,26	282	2827,08	283	2829,91	283	2832,74	283	7,94
2849,79	285	2852,64	285	2855,49	286	2858,35	286	2861,21	286	7,95
2878,43	288	2881,31	288	2884,19	289	2887,08	289	2889,97	289	7,96
2907,36	291	2910,27	291	2913,18	291	2916,09	292	2919,01	292	7,97
2936,58	294	2939,52	294	2942,46	294	2945,40	295	2948,35	295	7,98
2966,09	297	2969,06	297	2972,03	297	2975,00	298	2977,98	298	7,99

The error of the approximations given on pp. 168 and 169 is not greater than 0,005 and the error of an approximation obtained by linear interpolation is less than 0,00538 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
8,00	2980,96	298	2983,94	299	2986,93	298	2989,91	300	2992,91	299
8,01	3010,92	301	3013,93	301	3016,94	302	3019,96	302	3022,98	303
8,02	3041,18	304	3044,22	305	3047,27	304	3050,31	306	3053,37	305
8,03	3071,74	307	3074,81	308	3077,89	308	3080,97	308	3084,05	309
8,04	3102,61	311	3105,72	310	3108,82	312	3111,94	311	3115,05	312
8,05	3133,79	314	3136,93	314	3140,07	314	3143,21	315	3146,36	314
8,06	3165,29	317	3168,46	317	3171,63	317	3174,80	318	3177,98	318
8,07	3197,10	320	3200,30	320	3203,50	321	3206,71	321	3209,92	321
8,08	3229,23	323	3232,46	324	3235,70	324	3238,94	324	3242,18	324
8,09	3261,69	326	3264,95	327	3268,22	327	3271,49	327	3274,76	328
8,10	3294,47	329	3297,76	330	3301,06	331	3304,37	330	3307,67	331
8,11	3327,58	333	3330,91	333	3334,24	334	3337,58	333	3340,91	335
8,12	3361,02	336	3364,38	337	3367,75	337	3371,12	337	3374,49	338
8,13	3394,80	340	3398,20	340	3401,60	340	3405,00	341	3408,41	341
8,14	3428,92	343	3432,35	343	3435,78	344	3439,22	344	3442,66	345
8,15	3463,38	346	3466,84	347	3470,31	347	3473,78	348	3477,26	348
8,16	3498,19	350	3501,69	350	3505,19	351	3508,70	351	3512,21	351
8,17	3533,34	354	3536,88	354	3540,42	354	3543,96	355	3547,51	354
8,18	3568,85	358	3572,43	357	3576,00	358	3579,58	358	3583,16	358
8,19	3604,72	361	3608,33	361	3611,94	361	3615,55	362	3619,17	362
8,20	3640,95	364	3644,59	365	3648,24	365	3651,89	365	3655,54	366
8,21	3677,54	368	3681,22	368	3684,90	369	3688,59	369	3692,28	370
8,22	3714,50	372	3718,22	372	3721,94	372	3725,66	373	3729,39	373
8,23	3751,83	376	3755,59	375	3759,34	377	3763,11	376	3766,87	377
8,24	3789,54	379	3793,33	380	3797,13	380	3800,93	380	3804,73	381
8,25	3827,63	383	3831,46	383	3835,29	384	3839,13	384	3842,97	384
8,26	3866,09	387	3869,96	387	3873,83	388	3877,71	388	3881,59	388
8,27	3904,95	391	3908,86	391	3912,77	391	3916,68	392	3920,60	392
8,28	3944,19	395	3948,14	395	3952,09	395	3956,04	396	3960,00	396
8,29	3983,83	399	3987,82	399	3991,81	399	3995,80	400	3999,80	400
8,30	4023,87	403	4027,90	403	4031,93	403	4035,96	404	4040,00	404
8,31	4064,31	407	4068,38	407	4072,45	407	4076,52	408	4080,60	409
8,32	4105,16	411	4109,27	411	4113,38	411	4117,49	412	4121,61	413
8,33	4146,42	415	4150,57	415	4154,72	416	4158,88	416	4163,04	416
8,34	4188,09	419	4192,28	419	4196,47	420	4200,67	421	4204,88	420
8,35	4230,18	423	4234,41	424	4238,65	424	4242,89	425	4247,14	424
8,36	4272,69	428	4276,97	428	4281,25	428	4285,53	429	4289,82	429
8,37	4315,64	431	4319,95	433	4324,28	432	4328,60	433	4332,93	434
8,38	4359,01	436	4363,37	437	4367,74	437	4372,11	437	4376,48	438
8,39	4402,82	440	4407,22	441	4411,63	442	4416,05	441	4420,46	443
8,40	4447,07	445	4451,52	445	4455,97	446	4460,43	446	4464,89	447
8,41	4491,76	449	4496,25	450	4500,75	451	4505,26	450	4509,76	452
8,42	4536,90	454	4541,44	455	4545,99	454	4550,53	456	4555,09	455
8,43	4582,50	458	4587,08	459	4591,67	460	4596,27	460	4600,87	460
8,44	4628,55	464	4633,19	463	4637,82	464	4642,46	465	4647,11	465
8,45	4675,07	468	4679,75	468	4684,43	469	4689,12	469	4693,81	470
8,46	4722,06	472	4726,78	473	4731,51	474	4736,25	473	4740,98	475
8,47	4769,52	477	4774,29	477	4779,06	479	4783,85	478	4788,63	479
8,48	4817,45	482	4822,27	482	4827,09	483	4831,92	484	4836,76	484
8,49	4865,87	486	4870,73	488	4875,61	488	4880,49	488	4885,37	489

Błąd przybliżeń podanych na str. 170 i 171 jest nie większy niż 0,005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,00562 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
2995,90	300	2998,90	300	3001,90	300	3004,90	301	3007,91	301	8,00
3026,01	303	3029,04	303	3032,07	303	3035,10	304	3038,14	304	8,01
3056,42	306	3059,48	306	3062,54	306	3065,60	307	3068,67	307	8,02
3087,14	309	3090,23	309	3093,32	309	3096,41	310	3099,51	310	8,03
3118,17	311	3121,28	313	3124,41	312	3127,53	313	3130,66	313	8,04
3149,50	315	3152,65	316	3155,81	316	3158,97	316	3162,13	316	8,05
3181,16	318	3184,34	318	3187,52	319	3190,71	320	3193,91	319	8,06
3213,13	321	3216,34	322	3219,56	322	3222,78	323	3226,01	322	8,07
3245,42	325	3248,67	325	3251,92	325	3255,17	326	3258,43	326	8,08
3278,04	328	3281,32	328	3284,60	329	3287,89	329	3291,18	329	8,09
3310,98	331	3314,29	332	3317,61	332	3320,93	332	3324,25	333	8,10
3344,26	334	3347,60	335	3350,95	336	3354,31	335	3357,66	336	8,11
3377,87	338	3381,25	338	3384,63	339	3388,02	339	3391,41	339	8,12
3411,82	341	3415,23	342	3418,65	342	3422,07	342	3425,49	343	8,13
3446,11	344	3449,55	345	3453,00	346	3456,46	346	3459,92	346	8,14
3480,74	348	3484,22	349	3487,71	349	3491,20	349	3494,69	350	8,15
3515,72	352	3519,24	352	3522,76	352	3526,28	353	3529,81	353	8,16
3551,05	356	3554,61	355	3558,16	356	3561,72	357	3565,29	356	8,17
3586,74	359	3590,33	359	3593,92	360	3597,52	360	3601,12	360	8,18
3622,79	363	3626,42	362	3630,04	364	3633,68	363	3637,31	364	8,19
3659,20	366	3662,86	367	3666,53	366	3670,19	368	3673,87	367	8,20
3695,98	369	3699,67	371	3703,38	370	3707,08	371	3710,79	371	8,21
3733,12	374	3736,86	374	3740,60	374	3744,34	374	3748,08	375	8,22
3770,64	377	3774,41	378	3778,19	378	3781,97	378	3785,75	379	8,23
3808,54	381	3812,35	381	3816,16	382	3819,98	382	3823,80	383	8,24
3846,81	385	3850,66	385	3854,51	386	3858,37	386	3862,23	386	8,25
3885,47	389	3889,36	389	3893,25	390	3897,15	390	3901,05	390	8,26
3924,52	393	3928,45	393	3932,38	393	3936,31	394	3940,25	394	8,27
3963,96	397	3967,93	397	3971,90	397	3975,87	398	3979,85	398	8,28
4003,80	401	4007,81	401	4011,82	401	4015,83	402	4019,85	402	8,29
4044,04	405	4048,09	405	4052,14	405	4056,19	406	4060,25	406	8,30
4084,69	408	4088,77	409	4092,86	410	4096,96	410	4101,06	410	8,31
4125,74	413	4129,87	413	4134,00	413	4138,13	414	4142,27	415	8,32
4167,20	417	4171,37	417	4175,54	418	4179,72	418	4183,90	419	8,33
4209,08	421	4213,29	422	4217,51	422	4221,73	422	4225,95	423	8,34
4251,38	426	4255,64	426	4259,90	426	4264,16	426	4268,42	427	8,35
4294,11	430	4298,41	430	4302,71	430	4307,01	431	4311,32	432	8,36
4337,27	434	4341,61	434	4345,95	435	4350,30	435	4354,65	436	8,37
4380,86	438	4385,24	439	4389,63	439	4394,02	440	4398,42	440	8,38
4424,89	442	4429,31	444	4433,75	443	4438,18	444	4442,62	445	8,39
4469,36	447	4473,83	448	4478,31	448	4482,79	448	4487,27	449	8,40
4514,28	451	4518,79	452	4523,31	453	4527,84	453	4532,37	453	8,41
4559,64	457	4564,21	456	4568,77	457	4573,34	458	4577,92	458	8,42
4605,47	461	4610,08	461	4614,69	462	4619,31	462	4623,93	462	8,43
4651,76	465	4656,41	466	4661,07	466	4665,73	467	4670,40	467	8,44
4698,51	470	4703,21	470	4707,91	471	4712,62	472	4717,34	472	8,45
4745,73	475	4750,48	475	4755,23	476	4759,99	476	4764,75	477	8,46
4793,42	480	4798,22	480	4803,02	480	4807,82	481	4812,63	482	8,47
4841,60	484	4846,44	485	4851,29	485	4856,14	486	4861,00	487	8,48
4890,26	489	4895,15	490	4900,05	490	4904,95	491	4909,86	491	8,49

The error of the approximations given on pp. 170 and 171 is not greater than 0,005 and the error of an approximation obtained by linear interpolation is less than 0,00562 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
8,50	4914,77	492	4919,69	492	4924,61	493	4929,54	493	4934,47	493
8,51	4964,16	497	4969,13	497	4974,10	498	4979,08	498	4984,06	499
8,52	5014,05	502	5019,07	502	5024,09	503	5029,12	503	5034,15	504
8,53	5064,45	506	5069,51	507	5074,58	508	5079,66	508	5084,74	509
8,54	5115,34	512	5120,46	513	5125,59	512	5130,71	514	5135,85	514
8,55	5166,75	517	5171,92	518	5177,10	518	5182,28	518	5187,46	519
8,56	5218,68	522	5223,90	523	5229,13	523	5234,36	524	5239,60	524
8,57	5271,13	527	5276,40	528	5281,68	529	5286,97	529	5292,26	529
8,58	5324,11	532	5329,43	533	5334,76	534	5340,10	534	5345,44	535
8,59	5377,61	538	5382,99	539	5388,38	539	5393,77	540	5399,17	540
8,60	5431,66	543	5437,09	544	5442,53	545	5447,98	545	5453,43	546
8,61	5486,25	549	5491,74	549	5497,23	550	5502,73	551	5508,24	551
8,62	5541,39	554	5546,93	555	5552,48	556	5558,04	556	5563,60	556
8,63	5597,08	560	5602,68	560	5608,28	561	5613,89	562	5619,51	562
8,64	5653,33	566	5658,99	566	5664,65	567	5670,32	567	5675,99	568
8,65	5710,15	571	5715,86	572	5721,58	572	5727,30	573	5733,03	574
8,66	5767,53	578	5773,31	577	5779,08	578	5784,86	579	5790,65	579
8,67	5825,50	583	5831,33	583	5837,16	584	5843,00	585	5848,85	585
8,68	5884,05	588	5889,93	590	5895,83	590	5901,73	590	5907,63	591
8,69	5943,18	595	5949,13	595	5955,08	596	5961,04	596	5967,00	597
8,70	6002,91	601	6008,92	601	6014,93	602	6020,95	602	6026,97	603
8,71	6063,24	607	6069,31	607	6075,38	608	6081,46	608	6087,54	609
8,72	6124,18	613	6130,31	613	6136,44	614	6142,58	614	6148,72	616
8,73	6185,73	619	6191,92	619	6198,11	620	6204,31	621	6210,52	621
8,74	6247,90	625	6254,15	625	6260,40	627	6266,67	627	6272,94	627
8,75	6310,69	631	6317,00	632	6323,32	633	6329,65	633	6335,98	634
8,76	6374,11	638	6380,49	638	6386,87	639	6393,26	640	6399,66	640
8,77	6438,17	644	6444,61	645	6451,06	646	6457,52	646	6463,98	646
8,78	6502,88	650	6509,38	652	6515,90	652	6522,42	652	6528,94	653
8,79	6568,23	657	6574,80	658	6581,38	659	6587,97	659	6594,56	660
8,80	6634,24	664	6640,88	665	6647,53	665	6654,18	665	6660,83	667
8,81	6700,92	670	6707,62	671	6714,33	672	6721,05	673	6727,78	673
8,82	6768,26	678	6775,04	677	6781,81	679	6788,60	679	6795,39	680
8,83	6836,29	684	6843,13	684	6849,97	686	6856,83	686	6863,69	686
8,84	6904,99	691	6911,90	692	6918,82	692	6925,74	693	6932,67	693
8,85	6974,39	698	6981,37	698	6988,35	699	6995,34	700	7002,34	701
8,86	7044,48	705	7051,53	706	7058,59	706	7065,65	707	7072,72	707
8,87	7115,28	712	7122,40	713	7129,53	713	7136,66	714	7143,80	715
8,88	7186,79	719	7193,98	720	7201,18	720	7208,38	722	7215,60	721
8,89	7259,02	726	7266,28	727	7273,55	728	7280,83	728	7288,11	730
8,90	7331,97	734	7339,31	734	7346,65	735	7354,00	736	7361,36	737
8,91	7405,66	741	7413,07	742	7420,49	742	7427,91	743	7435,34	744
8,92	7480,09	748	7487,57	749	7495,06	750	7502,56	751	7510,07	751
8,93	7555,27	755	7562,82	757	7570,39	758	7577,97	758	7585,55	759
8,94	7631,20	763	7638,83	764	7646,47	766	7654,13	765	7661,78	767
8,95	7707,89	771	7715,60	772	7723,32	773	7731,05	774	7738,79	774
8,96	7785,36	779	7793,15	779	7800,94	781	7808,75	781	7816,56	782
8,97	7863,60	787	7871,47	787	7879,34	789	7887,23	789	7895,12	790
8,98	7942,63	795	7950,58	795	7958,53	797	7966,50	797	7974,47	797
8,99	8022,46	802	8030,48	804	8038,52	804	8046,56	805	8054,61	806

Błąd przybliżeń podanych na str. 172 i 173 jest nie większy niż 0,005, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,00602 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
4939,40	495	4944,35	494	4949,29	495	4954,24	496	4959,20	496	8,50
4989,05	499	4994,04	499	4999,03	501	5004,04	500	5009,04	501	8,51
5039,19	504	5044,23	505	5049,28	505	5054,33	505	5059,38	507	8,52
5089,83	509	5094,92	510	5100,02	510	5105,12	511	5110,23	511	8,53
5140,99	514	5146,13	515	5151,28	515	5156,43	516	5161,59	516	8,54
5192,65	520	5197,85	520	5203,05	520	5208,25	522	5213,47	521	8,55
5244,84	525	5250,09	525	5255,34	526	5260,60	526	5265,86	527	8,56
5297,55	530	5302,85	531	5308,16	531	5313,47	531	5318,78	533	8,57
5350,79	536	5356,15	536	5361,51	536	5366,87	537	5372,24	537	8,58
5404,57	541	5409,98	541	5415,39	542	5420,81	542	5426,23	543	8,59
5458,89	546	5464,35	546	5469,81	548	5475,29	548	5480,77	548	8,60
5513,75	552	5519,27	552	5524,79	552	5530,31	554	5535,85	554	8,61
5569,16	557	5574,73	558	5580,31	559	5585,90	558	5591,48	560	8,62
5625,13	563	5630,76	564	5636,40	563	5642,03	565	5647,68	565	8,63
5681,67	568	5687,35	569	5693,04	570	5698,74	570	5704,44	571	8,64
5738,77	574	5744,51	575	5750,26	575	5756,01	576	5761,77	576	8,65
5796,44	580	5802,24	581	5808,05	581	5813,86	582	5819,68	582	8,66
5854,70	586	5860,56	586	5866,42	587	5872,29	588	5878,17	588	8,67
5913,54	592	5919,46	592	5925,38	593	5931,31	593	5937,24	594	8,68
5972,97	598	5978,95	598	5984,93	599	5990,92	599	5996,91	600	8,69
6033,00	604	6039,04	604	6045,08	605	6051,13	605	6057,18	606	8,70
6093,63	610	6099,73	610	6105,83	611	6111,94	612	6118,06	612	8,71
6154,88	615	6161,03	617	6167,20	617	6173,37	618	6179,55	618	8,72
6216,73	622	6222,95	623	6229,18	623	6235,41	624	6241,65	625	8,73
6279,21	629	6285,50	628	6291,78	630	6298,08	630	6304,38	631	8,74
6342,32	635	6348,67	635	6355,02	636	6361,38	636	6367,74	637	8,75
6406,06	641	6412,47	642	6418,89	642	6425,31	643	6431,74	643	8,76
6470,44	648	6476,92	648	6483,40	648	6489,88	650	6496,38	650	8,77
6535,47	654	6542,01	655	6548,56	655	6555,11	656	6561,67	656	8,78
6601,16	660	6607,76	661	6614,37	662	6620,99	662	6627,61	663	8,79
6667,50	667	6674,17	668	6680,85	668	6687,53	669	6694,22	670	8,80
6734,51	674	6741,25	674	6747,99	675	6754,74	676	6761,50	676	8,81
6802,19	681	6809,00	681	6815,81	682	6822,63	682	6829,45	684	8,82
6870,55	688	6877,43	688	6884,31	689	6891,20	689	6898,09	690	8,83
6939,60	695	6946,55	695	6953,50	695	6960,45	697	6967,42	697	8,84
7009,35	701	7016,36	702	7023,38	703	7030,41	703	7037,44	704	8,85
7079,79	709	7086,88	709	7093,97	709	7101,06	711	7108,17	711	8,86
7150,95	715	7158,10	716	7165,26	717	7172,43	718	7179,61	718	8,87
7222,81	723	7230,04	723	7237,27	725	7244,52	724	7251,76	726	8,88
7295,41	729	7302,70	731	7310,01	731	7317,32	733	7324,65	732	8,89
7368,73	737	7376,10	738	7383,48	738	7390,86	740	7398,26	740	8,90
7442,78	745	7450,23	745	7457,68	746	7465,14	747	7472,61	748	8,91
7517,58	752	7525,10	753	7532,63	754	7540,17	754	7547,71	756	8,92
7593,14	759	7600,73	761	7608,34	761	7615,95	762	7623,57	763	8,93
7669,45	767	7677,12	768	7684,80	769	7692,49	770	7700,19	770	8,94
7746,53	775	7754,28	776	7762,04	776	7769,80	778	7777,58	778	8,95
7824,38	783	7832,21	784	7840,05	784	7847,89	785	7855,74	786	8,96
7903,02	791	7910,93	791	7918,84	792	7926,76	793	7934,69	794	8,97
7982,44	799	7990,43	800	7998,43	800	8006,43	801	8014,44	802	8,98
8062,67	807	8070,74	807	8078,81	808	8086,89	809	8094,98	810	8,99

The error of the approximations given on pp. 172 and 173 is not greater than 0,005 and the error of an approximation obtained by linear interpolation is less than 0,00602 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
9,00	8103,08	811	8111,19	812	8119,31	812	8127,43	813	8135,56	814
9,01	8184,52	819	8192,71	820	8200,91	820	8209,11	821	8217,32	822
9,02	8266,78	827	8275,05	828	8283,33	828	8291,61	830	8299,91	830
9,03	8349,86	835	8358,21	837	8366,58	837	8374,95	838	8383,33	838
9,04	8433,78	844	8442,22	844	8450,66	846	8459,12	846	8467,58	847
9,05	8518,54	852	8527,06	853	8535,59	854	8544,13	855	8552,68	856
9,06	8604,15	861	8612,76	862	8621,38	862	8630,00	864	8638,64	864
9,07	8690,62	870	8699,32	870	8708,02	871	8716,73	873	8725,46	873
9,08	8777,97	878	8786,75	879	8795,54	880	8804,34	881	8813,15	882
9,09	8866,19	887	8875,06	888	8883,94	888	8892,82	890	8901,72	891
9,10	8955,29	896	8964,25	897	8973,22	898	8982,20	899	8991,19	899
9,11	9045,29	905	9054,34	906	9063,40	907	9072,47	908	9081,55	908
9,12	9136,20	914	9145,34	915	9154,49	916	9163,65	917	9172,82	918
9,13	9228,02	923	9237,25	925	9246,50	925	9255,75	926	9265,01	927
9,14	9320,77	932	9330,09	934	9339,43	934	9348,77	935	9358,12	937
9,15	9414,44	942	9423,86	943	9433,29	944	9442,73	944	9452,17	946
9,16	9509,06	951	9518,57	952	9528,09	954	9537,63	954	9547,17	955
9,17	9604,62	961	9614,23	962	9623,85	963	9633,48	964	9643,12	965
9,18	9701,15	971	9710,86	971	9720,57	973	9730,30	974	9740,04	974
9,19	9798,65	980	9808,45	982	9818,27	982	9828,09	983	9837,92	985
9,20	9897,13	990	9907,03	991	9916,94	993	9926,87	993	9936,80	994
9,21	9996,60	1000								
9,21			10006,6	100	10016,6	100	10026,6	101	10036,7	100
9,22	10097,1	101	10107,2	101	10117,3	101	10127,4	101	10137,5	102
9,23	10198,5	102	10208,7	103	10219,0	102	10229,2	102	10239,4	103
9,24	10301,0	103	10311,3	104	10321,7	103	10332,0	103	10342,3	104
9,25	10404,6	104	10415,0	104	10425,4	104	10435,8	105	10446,3	104
9,26	10509,1	105	10519,6	106	10530,2	105	10540,7	106	10551,3	105
9,27	10614,8	106	10625,4	106	10636,0	106	10646,6	107	10657,3	107
9,28	10721,4	108	10732,2	107	10742,9	107	10753,6	108	10764,4	108
9,29	10829,2	108	10840,0	109	10850,9	108	10861,7	109	10872,6	109
9,30	10938,0	110	10949,0	109	10959,9	110	10970,9	110	10981,9	109
9,31	11047,9	111	11059,0	111	11070,1	110	11081,1	111	11092,2	111
9,32	11159,0	111	11170,1	112	11181,3	112	11192,5	112	11203,7	112
9,33	11271,1	113	11282,4	113	11293,7	113	11305,0	113	11316,3	113
9,34	11384,4	114	11395,8	114	11407,2	114	11418,6	114	11430,0	115
9,35	11498,8	115	11510,3	115	11521,8	116	11533,4	115	11544,9	116
9,36	11614,4	116	11626,0	116	11637,6	117	11649,3	116	11660,9	117
9,37	11731,1	118	11742,9	117	11754,6	118	11766,4	117	11778,1	118
9,38	11849,0	119	11860,9	118	11872,7	119	11884,6	119	11896,5	119
9,39	11968,1	120	11980,1	120	11992,1	120	12004,1	120	12016,1	120
9,40	12088,4	121	12100,5	121	12112,6	121	12124,7	121	12136,8	122
9,41	12209,9	122	12222,1	122	12234,3	123	12246,6	122	12258,8	123
9,42	12332,6	123	12344,9	124	12357,3	123	12369,6	124	12382,0	124
9,43	12456,5	125	12469,0	125	12481,5	125	12494,0	125	12506,5	125
9,44	12581,7	126	12594,3	126	12606,9	126	12619,5	126	12632,1	127
9,45	12708,2	127	12720,9	127	12733,6	127	12746,3	128	12759,1	128
9,46	12835,9	128	12848,7	129	12861,6	128	12874,4	129	12887,3	129
9,47	12964,9	130	12977,9	129	12990,8	130	13003,8	131	13016,9	130
9,48	13095,2	131	13108,3	131	13121,4	131	13134,5	132	13147,7	131
9,49	13226,8	132	13240,0	133	13253,3	132	13266,5	133	13279,8	133

Błąd przybliżeń podanych na str. 174 i 175 jest dla $0,900 \leq x < 9,211$ nie większy niż 0,005, a dla $9,211 \leq x < 9,500$ nie większy niż 0,05. Błąd przybliżenia otrzymanego przez interpolację liniową jest dla $9,000 < x < 9,211$ mniejszy niż 0,00626 + błąd zaokrąglenia wyniku, a dla $9,211 < x < 9,500$ mniejszy niż 0,0517 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
8143,70	815	8151,85	815	8160,00	817	8168,17	817	8176,34	818	9,00
8225,55	823	8233,78	823	8242,01	825	8250,26	825	8258,51	827	9,01
8308,21	832	8316,53	832	8324,85	833	8333,18	833	8341,51	835	9,02
8391,71	840	8400,11	840	8408,51	842	8416,93	842	8425,35	843	9,03
8476,05	848	8484,53	849	8493,02	850	8501,52	850	8510,02	852	9,04
8561,24	856	8569,80	858	8578,38	858	8586,96	859	8595,55	860	9,05
8647,28	865	8655,93	866	8664,59	867	8673,26	868	8681,94	868	9,06
8734,19	873	8742,92	875	8751,67	876	8760,43	876	8769,19	878	9,07
8821,97	882	8830,79	884	8839,63	884	8848,47	885	8857,32	887	9,08
8910,63	891	8919,54	893	8928,47	893	8937,40	894	8946,34	895	9,09
9000,18	901	9009,19	901	9018,20	902	9027,22	903	9036,25	904	9,10
9090,63	910	9099,73	910	9108,83	912	9117,95	912	9127,07	913	9,11
9182,00	918	9191,18	920	9200,38	920	9209,58	922	9218,80	922	9,12
9274,28	928	9283,56	928	9292,84	930	9302,14	931	9311,45	932	9,13
9367,49	937	9376,86	938	9386,24	939	9395,63	940	9405,03	941	9,14
9461,63	947	9471,10	947	9480,57	949	9490,06	949	9499,55	951	9,15
9556,72	956	9566,28	957	9575,85	958	9585,43	959	9595,02	960	9,16
9652,77	966	9662,43	966	9672,09	968	9681,77	969	9691,46	969	9,17
9749,78	975	9759,53	977	9769,30	977	9779,07	979	9788,86	979	9,18
9847,77	985	9857,62	986	9867,48	987	9877,35	989	9887,24	989	9,19
9946,74	995	9956,69	996	9966,65	997	9976,62	999	9986,61	999	9,20
										9,21
10046,7	101	10056,8	100	10066,8	101	10076,9	101	10087,0	101	9,21
10147,7	101	10157,8	102	10168,0	102	10178,2	101	10188,3	102	9,22
10249,7	102	10259,9	103	10270,2	103	10280,5	102	10290,7	103	9,23
10352,7	103	10363,0	104	10373,4	104	10383,8	104	10394,2	104	9,24
10456,7	105	10467,2	105	10477,7	104	10488,1	105	10498,6	105	9,25
10561,8	106	10572,4	106	10583,0	105	10593,5	106	10604,1	107	9,26
10668,0	106	10678,6	107	10689,3	107	10700,0	107	10710,7	107	9,27
10775,2	108	10786,0	107	10796,7	108	10807,5	109	10818,4	108	9,28
10883,5	109	10894,4	109	10905,3	109	10916,2	109	10927,1	109	9,29
10992,8	110	11003,8	111	11014,9	110	11025,9	110	11036,9	110	9,30
11103,3	111	11114,4	112	11125,6	111	11136,7	111	11147,8	112	9,31
11214,9	112	11226,1	113	11237,4	112	11248,6	113	11259,9	112	9,32
11327,6	114	11339,0	113	11350,3	114	11361,7	113	11373,0	114	9,33
11441,5	114	11452,9	115	11464,4	114	11475,8	115	11487,3	115	9,34
11556,5	115	11568,0	116	11579,6	116	11591,2	116	11602,8	116	9,35
11672,6	117	11684,3	117	11696,0	117	11707,7	117	11719,4	117	9,36
11789,9	118	11801,7	118	11813,5	118	11825,3	119	11837,2	118	9,37
11908,4	119	11920,3	119	11932,2	120	11944,2	119	11956,1	120	9,38
12028,1	120	12040,1	121	12052,2	120	12064,2	121	12076,3	121	9,39
12149,0	121	12161,1	122	12173,3	122	12185,5	122	12197,7	122	9,40
12271,1	123	12283,4	122	12295,6	123	12307,9	124	12320,3	123	9,41
12394,4	124	12406,8	124	12419,2	124	12431,6	125	12444,1	124	9,42
12519,0	125	12531,5	125	12544,0	126	12556,6	125	12569,1	126	9,43
12644,8	126	12657,4	127	12670,1	127	12682,8	127	12695,5	127	9,44
12771,9	127	12784,6	128	12797,4	128	12810,2	129	12823,1	128	9,45
12900,2	129	12913,1	130	12926,1	129	12939,0	129	12951,9	130	9,46
13029,9	130	13042,9	131	13056,0	130	13069,0	131	13082,1	131	9,47
13160,8	132	13174,0	132	13187,2	132	13200,4	132	13213,6	132	9,48
13293,1	133	13306,4	133	13319,7	133	13333,0	134	13346,4	133	9,49

e^x

The error of the approximations given on pp. 174 and 175 is not greater than 0,005 for $9,000 \leq x < 9,211$ and not greater than 0,05 for $9,211 \leq x < 9,500$. The error of an approximation obtained by linear interpolation for $9,000 < x < 9,211$ is less than 0,00626 + the error of rounding off the result and for $9,211 < x < 9,500$ less than 0,0517 + the error of rounding off the result.

An example of interpolation is given on p. 141.

IX. Funkcja wykładnicza e^x

x	0	δ	1	δ	2	δ	3	δ	4	δ
9,50	13359,7	134	13373,1	134	13386,5	134	13399,9	134	13413,3	134
9,51	13494,0	135	13507,5	135	13521,0	135	13534,5	136	13548,1	135
9,52	13629,6	136	13643,2	137	13656,9	137	13670,6	136	13684,2	137
9,53	13766,6	138	13780,4	138	13794,2	138	13808,0	138	13821,8	138
9,54	13904,9	140	13918,9	139	13932,8	139	13946,7	140	13960,7	139
9,55	14044,7	140	14058,7	141	14072,8	141	14086,9	141	14101,0	141
9,56	14185,8	142	14200,0	142	14214,2	143	14228,5	142	14242,7	143
9,57	14328,4	144	14342,8	143	14357,1	144	14371,5	143	14385,8	144
9,58	14472,4	145	14486,9	145	14501,4	145	14515,9	145	14530,4	146
9,59	14617,9	146	14632,5	146	14647,1	147	14661,8	147	14676,5	146
9,60	14764,8	148	14779,6	147	14794,3	148	14809,1	149	14824,0	148
9,61	14913,2	149	14928,1	149	14943,0	150	14958,0	149	14972,9	150
9,62	15063,0	151	15078,1	151	15093,2	151	15108,3	151	15123,4	152
9,63	15214,4	153	15229,7	152	15244,9	152	15260,1	153	15275,4	153
9,64	15367,3	154	15382,7	154	15398,1	154	15413,5	154	15428,9	155
9,65	15521,8	155	15537,3	156	15552,9	155	15568,4	156	15584,0	156
9,66	15677,8	157	15693,5	157	15709,2	157	15724,9	157	15740,6	158
9,67	15835,3	159	15851,2	159	15867,1	158	15882,9	159	15898,8	159
9,68	15994,5	160	16010,5	160	16026,5	161	16042,6	160	16058,6	161
9,69	16155,2	162	16171,4	162	16187,6	162	16203,8	162	16220,0	162
9,70	16317,6	163	16333,9	164	16350,3	163	16366,6	164	16383,0	164
9,71	16481,6	165	16498,1	165	16514,6	165	16531,1	166	16547,7	165
9,72	16647,2	167	16663,9	167	16680,6	167	16697,3	167	16714,0	167
9,73	16814,6	168	16831,4	168	16848,2	169	16865,1	168	16881,9	169
9,74	16983,5	170	17000,5	170	17017,5	171	17034,6	170	17051,6	171
9,75	17154,2	172	17171,4	172	17188,6	172	17205,8	172	17223,0	172
9,76	17326,6	174	17344,0	173	17361,3	174	17378,7	174	17396,1	174
9,77	17500,8	175	17518,3	175	17535,8	175	17553,3	176	17570,9	176
9,78	17676,7	176	17694,3	177	17712,0	178	17729,8	177	17747,5	178
9,79	17854,3	179	17872,2	179	17890,1	178	17907,9	180	17925,9	179
9,80	18033,7	181	18051,8	180	18069,8	181	18087,9	181	18106,0	181
9,81	18215,0	182	18233,2	183	18251,5	182	18269,7	183	18288,0	183
9,82	18398,1	184	18416,5	184	18434,9	184	18453,3	185	18471,8	185
9,83	18583,0	185	18601,5	187	18620,2	186	18638,8	186	18657,4	187
9,84	18769,7	188	18788,5	188	18807,3	188	18826,1	188	18844,9	189
9,85	18958,4	189	18977,3	190	18996,3	190	19015,3	190	19034,3	191
9,86	19148,9	191	19168,0	192	19187,2	192	19206,4	192	19225,6	193
9,87	19341,3	194	19360,7	194	19380,1	194	19399,5	194	19418,9	194
9,88	19535,7	196	19555,3	195	19574,8	196	19594,4	196	19614,0	196
9,89	19732,1	197	19751,8	198	19771,6	197	19791,3	198	19811,1	199
9,90	19930,4	199	19950,3	200	19970,3	200	19990,3	200	20010,3	200
9,91	20130,7	201	20150,8	202	20171,0	202	20191,2	202	20211,4	202
9,92	20333,0	203	20353,3	204	20373,7	204	20394,1	204	20414,5	204
9,93	20537,3	206	20557,9	206	20578,5	205	20599,0	207	20619,7	206
9,94	20743,7	208	20764,5	208	20785,3	208	20806,1	208	20826,9	208
9,95	20952,2	210	20973,2	210	20994,2	210	21015,2	210	21036,2	210
9,96	21162,8	212	21184,0	212	21205,2	212	21226,4	212	21247,6	213
9,97	21375,5	214	21396,9	214	21418,3	214	21439,7	215	21461,2	214
9,98	21590,3	216	21611,9	216	21633,5	217	21655,2	216	21676,8	217
9,99	21807,3	218	21829,1	219	21851,0	218	21872,8	219	21894,7	219

$$e^{10} \approx 22026,5, \quad e^{20} \approx 10^4 \cdot 48516,5, \quad e^{30} \approx 10^9 \cdot 10686,5, \quad e^{40} \approx 10^{12} \cdot 23538,5,$$

Dla $x > 10$ można korzystać ze wzoru:

$$e^x = 10^n e^{x-n \cdot \log_e 10} = 10^n e^{x-n \cdot 2,30258509 \dots}$$

gdzie n jest liczbą naturalną.

Błąd przybliżeń podanych na str. 176 i 177 jest nie większy niż 0,05, a błąd przybliżenia otrzymanego przez interpolację liniową jest mniejszy niż 0,0528 + błąd zaokrąglenia wyniku.

Przykład interpolacji na str. 140.

IX. Exponential function e^x

5	δ	6	δ	7	δ	8	δ	9	δ	x
13426,7	134	13440,1	135	13453,6	134	13467,0	135	13480,5	135	9,50
13561,6	136	13575,2	136	13588,8	136	13602,4	136	13616,0	136	9,51
13697,9	137	13711,6	138	13725,4	137	13739,1	137	13752,8	138	9,52
13835,6	138	13849,4	139	13863,3	139	13877,2	138	13891,0	139	9,53
13974,6	140	13988,6	140	14002,6	140	14016,6	141	14030,7	140	9,54
14115,1	141	14129,2	142	14143,4	141	14157,5	142	14171,7	141	9,55
14257,0	142	14271,2	143	14285,5	143	14299,8	143	14314,1	143	9,56
14400,2	144	14414,6	145	14429,1	144	14443,5	145	14458,0	144	9,57
14545,0	145	14559,5	146	14574,1	146	14588,7	146	14603,3	146	9,58
14691,1	147	14705,8	148	14720,6	147	14735,3	147	14750,0	148	9,59
14838,8	148	14853,6	149	14868,5	149	14883,4	149	14898,3	149	9,60
14987,9	150	15002,9	150	15017,9	151	15033,0	150	15048,0	150	9,61
15138,6	151	15153,7	152	15168,9	151	15184,0	152	15199,2	152	9,62
15290,7	153	15306,0	153	15321,3	153	15336,6	154	15352,0	153	9,63
15444,4	154	15459,8	155	15475,3	155	15490,8	155	15506,3	155	9,64
15599,6	156	15615,2	156	15630,8	157	15646,5	156	15662,1	157	9,65
15756,4	157	15772,1	158	15787,9	158	15803,7	158	15819,5	158	9,66
15914,7	159	15930,6	160	15946,6	159	15962,5	160	15978,5	160	9,67
16074,7	161	16090,8	161	16106,9	161	16123,0	161	16139,1	161	9,68
16236,2	163	16252,5	162	16268,7	163	16285,0	163	16301,3	163	9,69
16399,4	164	16415,8	164	16432,2	165	16448,7	164	16465,1	165	9,70
16564,2	166	16580,8	166	16597,4	166	16614,0	166	16630,6	166	9,71
16730,7	167	16747,4	168	16764,2	168	16781,0	167	16797,7	169	9,72
16898,8	169	16915,7	170	16932,7	169	16949,6	170	16966,6	169	9,73
17068,7	170	17085,7	171	17102,8	172	17120,0	171	17137,1	171	9,74
17240,2	173	17257,5	172	17274,7	173	17292,0	173	17309,3	173	9,75
17413,5	174	17430,9	174	17448,3	175	17465,8	175	17483,3	175	9,76
17588,5	176	17606,1	176	17623,7	176	17641,3	177	17659,0	177	9,77
17765,3	177	17783,0	178	17800,8	178	17818,6	179	17836,5	178	9,78
17943,8	180	17961,8	179	17979,7	180	17997,7	180	18015,7	180	9,79
18124,1	182	18142,3	181	18160,4	182	18178,6	182	18196,8	182	9,80
18306,3	183	18324,6	183	18342,9	184	18361,3	184	18379,7	184	9,81
18490,3	185	18508,8	185	18527,3	185	18545,8	186	18564,4	186	9,82
18676,1	187	18694,8	187	18713,5	187	18732,2	188	18751,0	187	9,83
18863,8	189	18882,7	189	18901,6	189	18920,5	189	18939,4	190	9,84
19053,4	190	19072,4	191	19091,5	191	19110,6	192	19129,8	191	9,85
19244,9	192	19264,1	193	19283,4	193	19302,7	193	19322,0	193	9,86
19438,3	194	19457,7	195	19477,2	195	19496,7	195	19516,2	195	9,87
19633,6	197	19653,3	197	19673,0	196	19692,6	197	19712,3	198	9,88
19831,0	198	19850,8	199	19870,7	198	19890,5	200	19910,5	199	9,89
20030,3	200	20050,3	201	20070,4	201	20090,5	201	20110,6	201	9,90
20231,6	202	20251,8	203	20272,1	203	20292,4	203	20312,7	203	9,91
20434,9	205	20455,4	204	20475,8	205	20496,3	205	20516,8	205	9,92
20640,3	206	20660,9	207	20681,6	207	20702,3	207	20723,0	207	9,93
20847,7	209	20868,6	209	20889,5	209	20910,4	209	20931,3	209	9,94
21057,2	211	21078,3	211	21099,4	211	21120,5	211	21141,6	212	9,95
21268,9	213	21290,2	213	21311,5	213	21332,8	213	21354,1	214	9,96
21482,6	215	21504,1	215	21525,6	216	21547,2	215	21568,7	216	9,97
21698,5	217	21720,2	218	21742,0	217	21763,7	218	21785,5	218	9,98
21916,6	219	21938,5	220	21960,5	220	21982,5	220	22004,5	220	9,99

$$e^{60} \approx 10^{17} \cdot 51847,1, \quad e^{60} \approx 10^{23} \cdot 11420,1, \quad e^{70} \approx 10^{26} \cdot 25154,4, \quad e^{80} \approx 10^{30} \cdot 55406,2.$$

For $x > 10$ we can use the formula

$$e^x = 10^n e^{x-n \cdot \log_e 10} = 10^n e^{x-n \cdot 2,30258509 \dots},$$

where n is a natural number.

The error of the approximations given on pp. 176 and 177 is not greater than 0,05 and the error of an approximation obtained by linear interpolation is less than 0,0528 + the error of rounding off the result.

An example of interpolation is given on p. 141.