

## TABLE OF ERLANG'S LOSS FORMULA

Computed by E. BROCKMEYER

$$\text{Formula: } B = \frac{\frac{y^n}{n!}}{1 + y + \frac{y^2}{2!} + \dots + \frac{y^n}{n!}}$$

where  $B$  is the loss,  $n$  the number of circuits and  $y$  the traffic-intensity in erlang.

The table gives for  $n = 1 - 260$  the values of  $y$  corresponding to various fixed values of  $B$ .

$n$	$B=0.001$	$B=0.002$	$B=0.003$	$B=0.004$	$B=0.005$	$B=0.010$	$B=0.020$	$B=0.050$
1	0.001	0.002	0.003	0.004	0.005	0.01	0.02	0.05
2	0.05	0.07	0.08	0.09	0.11	0.15	0.22	0.38
3	0.19	0.25	0.29	0.32	0.35	0.46	0.60	0.90
4	0.44	0.53	0.60	0.66	0.70	0.87	1.09	1.52
5	0.76	0.90	0.99	1.07	1.13	1.36	1.66	2.22
6	1.15	1.33	1.45	1.54	1.62	1.91	2.28	2.96
7	1.58	1.80	1.95	2.06	2.16	2.50	2.94	3.74
8	2.05	2.31	2.48	2.62	2.73	3.13	3.63	4.54
9	2.56	2.85	3.05	3.21	3.33	3.78	4.34	5.37
10	3.09	3.43	3.65	3.82	3.96	4.46	5.08	6.22
11	3.65	4.02	4.26	4.45	4.61	5.16	5.84	7.08
12	4.23	4.64	4.90	5.11	5.28	5.88	6.62	7.95
13	4.83	5.27	5.56	5.78	5.96	6.61	7.41	8.83
14	5.45	5.92	6.23	6.47	6.66	7.35	8.20	9.73
15	6.08	6.58	6.91	7.17	7.38	8.11	9.01	10.63

$n$	$B=0.001$	$B=0.002$	$B=0.003$	$B=0.004$	$B=0.005$	$B=0.010$	$B=0.020$	$B=0.050$
16	6.72	7.26	7.61	7.88	8.10	8.87	9.83	11.54
17	7.38	7.95	8.32	8.60	8.83	9.65	10.66	12.46
18	8.05	8.64	9.03	9.33	9.58	10.44	11.49	13.38
19	8.72	9.35	9.76	10.07	10.33	11.23	12.33	14.31
20	9.41	10.07	10.50	10.82	11.09	12.03	13.18	15.25
21	10.11	10.79	11.24	11.58	11.86	12.84	14.04	16.19
22	10.81	11.53	11.99	12.34	12.63	13.65	14.90	17.13
23	11.52	12.27	12.75	13.11	13.42	14.47	15.76	18.08
24	12.24	13.01	13.51	13.89	14.20	15.29	16.63	19.03
25	12.97	13.76	14.28	14.67	15.00	16.12	17.50	19.99
26	13.70	14.52	15.05	15.46	15.80	16.96	18.38	20.94
27	14.44	15.28	15.83	16.25	16.60	17.80	19.26	21.90
28	15.18	16.05	16.62	17.05	17.41	18.64	20.15	22.87
29	15.93	16.83	17.41	17.85	18.22	19.49	21.04	23.83
30	16.68	17.61	18.20	18.66	19.03	20.34	21.93	24.80
31	17.44	18.39	19.00	19.47	19.85	21.19	22.83	25.77
32	18.20	19.18	19.80	20.28	20.68	22.05	23.73	26.75
33	18.97	19.97	20.61	21.10	21.51	22.91	24.63	27.72
34	19.74	20.76	21.42	21.92	22.34	23.77	25.53	28.70
35	20.52	21.56	22.23	22.75	23.17	24.64	26.43	29.68
36	21.30	22.36	23.05	23.58	24.01	25.51	27.34	30.66
37	22.08	23.17	23.87	24.41	24.85	26.38	28.25	31.64
38	22.86	23.97	24.69	25.24	25.69	27.25	29.17	32.63
39	23.65	24.78	25.52	26.08	26.53	28.13	30.08	33.61
40	24.44	25.60	26.35	26.92	27.38	29.01	31.00	34.60
41	25.24	26.42	27.18	27.76	28.23	29.89	31.92	35.59
42	26.04	27.24	28.01	28.60	29.08	30.77	32.84	36.58
43	26.84	28.06	28.85	29.45	29.94	31.66	33.76	37.57
44	27.64	28.88	29.68	30.30	30.80	32.54	34.68	38.56
45	28.45	29.71	30.52	31.15	31.66	33.43	35.61	39.55
46	29.26	30.54	31.37	32.00	32.52	34.32	36.53	40.54
47	30.07	31.37	32.21	32.85	33.38	35.21	37.46	41.54
48	30.88	32.20	33.06	33.71	34.25	36.11	38.39	42.54
49	31.69	33.04	33.91	34.57	35.11	37.00	39.32	43.54
50	32.51	33.88	34.76	35.43	35.98	37.90	40.25	44.53

$n$	$B = 0.001$	$B = 0.002$	$B = 0.003$	$B = 0.004$	$B = 0.005$	$B = 0.010$
51	33.33	34.72	35.61	36.29	36.85	38.80
52	34.15	35.56	36.47	37.16	37.72	39.70
53	34.98	36.40	37.32	38.02	38.60	40.60
54	35.80	37.25	38.18	38.89	39.47	41.50
55	36.63	38.09	39.04	39.76	40.35	42.41
56	37.46	38.94	39.90	40.63	41.23	43.31
57	38.29	39.79	40.76	41.50	42.11	44.22
58	39.12	40.64	41.63	42.38	42.99	45.13
59	39.96	41.50	42.49	43.25	43.87	46.04
60	40.79	42.35	43.36	44.13	44.76	46.95
61	41.63	43.21	44.23	45.00	45.64	47.86
62	42.47	44.07	45.10	45.88	46.53	48.77
63	43.31	44.93	45.97	46.76	47.42	49.69
64	44.16	45.79	46.84	47.64	48.31	50.60
65	45.00	46.65	47.72	48.53	49.20	51.52
66	45.84	47.51	48.59	49.41	50.09	52.44
67	46.69	48.38	49.47	50.30	50.98	53.35
68	47.54	49.24	50.34	51.18	51.87	54.27
69	48.39	50.11	51.22	52.07	52.77	55.19
70	49.24	50.98	52.10	52.96	53.66	56.11
71	50.09	51.85	52.98	53.85	54.56	57.03
72	50.94	52.72	53.87	54.74	55.45	57.96
73	51.80	53.59	54.75	55.63	56.35	58.88
74	52.65	54.46	55.63	56.52	57.25	59.80
75	53.51	55.34	56.52	57.42	58.15	60.73
76	54.37	56.21	57.40	58.31	59.05	61.65
77	55.23	57.09	58.29	59.21	59.96	62.58
78	56.09	57.96	59.18	60.10	60.86	63.51
79	56.95	58.84	60.07	61.00	61.76	64.43
80	57.81	59.72	60.96	61.90	62.67	65.36
81	58.67	60.60	61.85	62.80	63.57	66.29
82	59.54	61.48	62.74	63.69	64.48	67.22
83	60.40	62.36	63.63	64.59	65.38	68.15
84	61.27	63.24	64.52	65.50	66.29	69.08
85	62.14	64.13	65.41	66.40	67.20	70.02

$n$	$B = 0.001$	$B = 0.002$	$B = 0.003$	$B = 0.004$	$B = 0.005$	$B = 0.010$
86	63.00	65.01	66.31	67.30	68.11	70.95
87	63.87	65.90	67.20	68.20	69.02	71.88
88	64.74	66.78	68.10	69.11	69.93	72.81
89	65.61	67.67	69.00	70.01	70.84	73.75
90	66.48	68.56	69.90	70.92	71.76	74.68
91	67.36	69.44	70.79	71.82	72.67	75.62
92	68.23	70.33	71.69	72.73	73.58	76.56
93	69.10	71.22	72.59	73.64	74.49	77.49
94	69.98	72.11	73.49	74.55	75.41	78.43
95	70.85	73.00	74.40	75.45	76.32	79.37
96	71.73	73.90	75.30	76.36	77.24	80.31
97	72.61	74.79	76.20	77.27	78.16	81.24
98	73.48	75.68	77.10	78.18	79.07	82.18
99	74.36	76.57	78.01	79.10	79.99	83.12
100	75.24	77.47	78.91	80.01	80.91	84.06
101	76.12	78.36	79.82	80.92	81.83	85.00
102	77.00	79.26	80.72	81.83	82.75	85.95
103	77.88	80.16	81.63	82.75	83.67	86.89
104	78.77	81.05	82.53	83.66	84.59	87.83
105	79.65	81.95	83.44	84.58	85.51	88.77
106	80.53	82.85	84.35	85.49	86.43	89.72
107	81.42	83.75	85.26	86.41	87.35	90.66
108	82.30	84.65	86.17	87.32	88.27	91.60
109	83.19	85.55	87.08	88.24	89.20	92.55
110	84.07	86.45	87.99	89.16	90.12	93.49
111	84.96	87.35	88.90	90.08	91.04	94.44
112	85.85	88.25	89.81	90.99	91.97	95.38
113	86.73	89.15	90.72	91.91	92.89	96.33
114	87.62	90.06	91.63	92.83	93.82	97.28
115	88.51	90.96	92.54	93.75	94.74	98.22
116	89.40	91.86	93.46	94.67	95.67	99.17
117	90.29	92.77	94.37	95.59	96.60	100.12
118	91.18	93.67	95.28	96.51	97.53	101.07
119	92.07	94.58	96.20	97.44	98.45	102.02
120	92.96	95.48	97.11	98.36	99.38	102.96

$n$	$B = 0.001$	$B = 0.002$	$B = 0.003$	$B = 0.004$	$B = 0.005$	$B = 0.010$
121	93.86	96.39	98.03	99.28	100.31	103.91
122	94.75	97.30	98.95	100.20	101.24	104.86
123	95.64	98.20	99.86	101.13	102.17	105.81
124	96.54	99.11	100.78	102.05	103.10	106.76
125	97.43	100.02	101.70	102.98	104.03	107.71
126	98.33	100.93	102.61	103.90	104.96	108.66
127	99.22	101.84	103.53	104.83	105.89	109.62
128	100.12	102.75	104.45	105.75	106.82	110.57
129	101.01	103.66	105.37	106.68	107.75	111.52
130	101.91	104.57	106.29	107.60	108.68	112.47
131	102.81	105.48	107.21	108.53	109.62	113.42
132	103.70	106.39	108.13	109.46	110.55	114.38
133	104.60	107.30	109.05	110.38	111.48	115.33
134	105.50	108.22	109.97	111.31	112.42	116.28
135	106.40	109.13	110.89	112.24	113.35	117.24
136	107.30	110.04	111.82	113.17	114.28	118.19
137	108.20	110.95	112.74	114.10	115.22	119.14
138	109.10	111.87	113.66	115.03	116.15	120.10
139	110.00	112.78	114.58	115.96	117.09	121.05
140	110.90	113.70	115.51	116.89	118.02	122.01
141	111.81	114.61	116.43	117.82	118.96	122.96
142	112.71	115.53	117.36	118.75	119.90	123.92
143	113.61	116.44	118.28	119.68	120.83	124.88
144	114.51	117.36	119.20	120.61	121.77	125.83
145	115.42	118.28	120.13	121.54	122.71	126.79
146	116.32	119.19	121.05	122.47	123.64	127.74
147	117.22	120.11	121.98	123.41	124.58	128.70
148	118.13	121.03	122.91	124.34	125.52	129.66
149	119.03	121.95	123.83	125.27	126.46	130.62
150	119.94	122.86	124.76	126.21	127.40	131.58
151	120.85	123.78	125.69	127.14	128.33	132.53
152	121.75	124.70	126.61	128.07	129.27	133.49
153	122.66	125.62	127.54	129.01	130.21	134.45
154	123.56	126.54	128.47	129.94	131.15	135.41
155	124.47	127.46	129.40	130.88	132.09	136.37

$n$	$B = 0.001$	$B = 0.002$	$B = 0.003$	$B = 0.004$	$B = 0.005$	$B = 0.010$
156	125.38	128.38	130.33	131.81	133.03	137.33
157	126.29	129.30	131.25	132.75	133.97	138.29
158	127.20	130.22	132.18	133.68	134.91	139.25
159	128.10	131.14	133.11	134.62	135.86	140.21
160	129.01	132.07	134.04	135.55	136.80	141.17
161	129.92	132.99	134.97	136.49	137.74	142.13
162	130.83	133.91	135.90	137.43	138.68	143.09
163	131.74	134.83	136.83	138.36	139.62	144.05
164	132.65	135.75	137.76	139.30	140.56	145.01
165	133.56	136.68	138.70	140.24	141.51	145.97
166	134.47	137.60	139.63	141.18	142.45	146.93
167	135.39	138.52	140.56	142.11	143.39	147.89
168	136.30	139.45	141.49	143.05	144.34	148.86
169	137.21	140.37	142.42	143.99	145.28	149.82
170	138.12	141.30	143.36	144.93	146.22	150.78
171	139.03	142.22	144.29	145.87	147.17	151.74
172	139.95	143.15	145.22	146.81	148.11	152.71
173	140.86	144.07	146.16	147.75	149.06	153.67
174	141.77	145.00	147.09	148.69	150.00	154.63
175	142.69	145.92	148.02	149.63	150.95	155.60
176	143.60	146.85	148.96	150.57	151.89	156.56
177	144.52	147.78	149.89	151.51	152.84	157.52
178	145.43	148.70	150.83	152.45	153.78	158.49
179	146.35	149.63	151.76	153.39	154.73	159.45
180	147.26	150.56	152.70	154.33	155.68	160.42
181	148.18	151.49	153.63	155.27	156.62	161.38
182	149.09	152.41	154.57	156.21	157.57	162.35
183	150.01	153.34	155.50	157.16	158.52	163.31
184	150.93	154.27	156.44	158.10	159.46	164.28
185	151.84	155.20	157.37	159.04	160.41	165.24
186	152.76	156.13	158.31	159.98	161.36	166.21
187	153.68	157.06	159.25	160.93	162.31	167.17
188	154.59	157.99	160.19	161.87	163.25	168.14
189	155.51	158.91	161.12	162.81	164.20	169.10
190	156.43	159.84	162.06	163.76	165.15	170.07

$n$	$B = 0.001$	$B = 0.002$	$B = 0.003$	$B = 0.004$	$B = 0.005$	$B = 0.010$
191	157.35	160.77	163.00	164.70	166.10	171.03
192	158.27	161.70	163.94	165.64	167.05	172.00
193	159.19	162.64	164.87	166.59	168.00	172.97
194	160.10	163.57	165.81	167.53	168.95	173.93
195	161.02	164.50	166.75	168.47	169.90	174.90
196	161.94	165.43	167.69	169.42	170.84	175.87
197	162.86	166.36	168.63	170.36	171.79	176.84
198	163.78	167.29	169.57	171.31	172.74	177.80
199	164.70	168.22	170.51	172.25	173.69	178.77
200	165.62	169.16	171.45	173.20	174.64	179.74
201	166.54	170.09	172.39	174.15	175.60	180.71
202	167.47	171.02	173.33	175.09	176.55	181.67
203	168.39	171.95	174.27	176.04	177.50	182.64
204	169.31	172.88	175.21	176.98	178.45	183.61
205	170.23	173.82	176.15	177.93	179.40	184.58
206	171.15	174.75	177.09	178.88	180.35	185.55
207	172.07	175.68	178.03	179.82	181.30	186.52
208	173.00	176.62	178.97	180.77	182.25	187.48
209	173.92	177.55	179.91	181.72	183.21	188.45
210	174.84	178.49	180.85	182.66	184.16	189.42
211	175.77	179.42	181.79	183.61	185.11	190.39
212	176.69	180.36	182.74	184.56	186.06	191.36
213	177.61	181.29	183.68	185.51	187.01	192.33
214	178.54	182.23	184.62	186.45	187.97	193.30
215	179.46	183.16	185.56	187.40	188.92	194.27
216	180.38	184.10	186.51	188.35	189.87	195.24
217	181.31	185.03	187.45	189.30	190.83	196.21
218	182.23	185.97	188.39	190.25	191.78	197.18
219	183.16	186.90	189.33	191.20	192.73	198.15
220	184.08	187.84	190.28	192.15	193.69	199.12
221	185.01	188.78	191.22	193.09	194.64	200.09
222	185.93	189.71	192.16	194.04	195.59	201.06
223	186.86	190.65	193.11	194.99	196.55	202.04
224	187.78	191.58	194.05	195.94	197.50	203.01
225	188.71	192.52	195.00	196.89	198.46	203.98

$n$	$B = 0.001$	$B = 0.002$	$B = 0.003$	$B = 0.004$	$B = 0.005$	$B = 0.010$
226	189.64	193.46	195.94	197.84	199.41	204.95
227	190.56	194.40	196.89	198.79	200.37	205.92
228	191.49	195.33	197.83	199.74	201.32	206.89
229	192.42	196.27	198.78	200.69	202.28	207.86
230	193.34	197.21	199.72	201.64	203.23	208.84
231	194.27	198.15	200.67	202.60	204.19	209.81
232	195.20	199.09	201.61	203.55	205.14	210.78
233	196.13	200.02	202.56	204.50	206.10	211.75
234	197.05	200.96	203.50	205.45	207.05	212.72
235	197.98	201.90	204.45	206.40	208.01	213.70
236	198.91	202.84	205.39	207.35	208.97	214.67
237	199.84	203.78	206.34	208.30	209.92	215.64
238	200.77	204.72	207.29	209.26	210.88	216.62
239	201.70	205.66	208.23	210.21	211.83	217.59
240	202.62	206.60	209.18	211.16	212.79	218.56
241	203.55	207.54	210.13	212.11	213.75	219.53
242	204.48	208.48	211.07	213.06	214.70	220.51
243	205.41	209.42	212.02	214.02	215.66	221.48
244	206.34	210.36	212.97	214.97	216.62	222.45
245	207.27	211.30	213.92	215.92	217.58	223.43
246	208.20	212.24	214.86	216.87	218.53	224.40
247	209.13	213.18	215.81	217.83	219.49	225.37
248	210.06	214.12	216.76	218.78	220.45	226.35
249	210.99	215.06	217.71	219.73	221.41	227.32
250	211.92	216.00	218.65	220.69	222.36	228.30
251	212.85	216.94	219.60	221.64	223.32	229.27
252	213.78	217.88	220.55	222.59	224.28	230.25
253	214.72	218.83	221.50	223.55	225.24	231.22
254	215.65	219.77	222.45	224.50	226.20	232.19
255	216.58	220.71	223.40	225.46	227.16	233.17
256	217.51	221.65	224.34	226.41	228.11	234.14
257	218.44	222.59	225.29	227.37	229.07	235.12
258	219.37	223.54	226.24	228.32	230.03	236.09
259	220.31	224.48	227.19	229.27	230.99	237.07
260	221.24	225.42	228.14	230.23	231.95	238.04