

## Statistical and Numerical Tables

TABLE A.9  
Gamma function

$x$	$\Gamma(x)$	$x$	$\Gamma(x)$	$x$	$\Gamma(x)$	$x$	$\Gamma(x)$
1.01	.99433	1.51	.88659	2.01	1.00427	2.51	1.33875
1.02	.98884	1.52	.88704	2.02	1.00862	2.52	1.34830
1.03	.98355	1.53	.88757	2.03	1.01296	2.53	1.35798
1.04	.97844	1.54	.88818	2.04	1.01758	2.54	1.36779
1.05	.97350	1.55	.88887	2.05	1.02218	2.55	1.37775
1.06	.96874	1.56	.88964	2.06	1.02687	2.56	1.38784
1.07	.96415	1.57	.89049	2.07	1.03164	2.57	1.39807
1.08	.95973	1.58	.89143	2.08	1.03650	2.58	1.40844
1.09	.95546	1.59	.89243	2.09	1.04145	2.59	1.41896
1.10	.95133	1.60	.89352	2.10	1.04649	2.60	1.42963
1.11	.94740	1.61	.89468	2.11	1.05161	2.61	1.44044
1.12	.94359	1.62	.89591	2.12	1.05682	2.62	1.45140
1.13	.93993	1.63	.89724	2.13	1.06213	2.63	1.46251
1.14	.93642	1.64	.89864	2.14	1.06751	2.64	1.47377
1.15	.93304	1.65	.90012	2.15	1.07300	2.65	1.48519
1.16	.92980	1.66	.90167	2.16	1.07857	2.66	1.49677
1.17	.92670	1.67	.90330	2.17	1.08424	2.67	1.50851
1.18	.92373	1.68	.90500	2.18	1.09000	2.68	1.52040
1.19	.92089	1.69	.90678	2.19	1.09585	2.69	1.53246
1.20	.91817	1.70	.90864	2.20	1.10180	2.70	1.54469
1.21	.91558	1.71	.91057	2.21	1.10785	2.71	1.55708
1.22	.91311	1.72	.91258	2.22	1.11399	2.72	1.56964
1.23	.91075	1.73	.91467	2.23	1.12023	2.73	1.58237
1.24	.90852	1.74	.91683	2.24	1.12657	2.74	1.59528
1.25	.90640	1.75	.91906	2.25	1.13300	2.75	1.60836
1.26	.90440	1.76	.92137	2.26	1.13954	2.76	1.62162
1.27	.90250	1.77	.92376	2.27	1.14618	2.77	1.63506
1.28	.90072	1.78	.92623	2.28	1.15292	2.78	1.64868
1.29	.89904	1.79	.92877	2.29	1.15976	2.79	1.66249
1.30	.89747	1.80	.93138	2.30	1.16671	2.80	1.67649
1.31	.89600	1.81	.93408	2.31	1.17377	2.81	1.69068
1.32	.89464	1.82	.93685	2.32	1.18093	2.82	1.70506
1.33	.89338	1.83	.93969	2.33	1.18819	2.83	1.71963
1.34	.89222	1.84	.94261	2.34	1.19557	2.84	1.73441
1.35	.89115	1.85	.94561	2.35	1.20305	2.85	1.74938
1.36	.89018	1.86	.94869	2.36	1.21065	2.86	1.76456
1.37	.88931	1.87	.95184	2.37	1.21836	2.87	1.77994
1.38	.88854	1.88	.95507	2.38	1.22618	2.88	1.79553
1.39	.88785	1.89	.95838	2.39	1.23412	2.89	1.81134
1.40	.88726	1.90	.96177	2.40	1.24217	2.90	1.82736
1.41	.88676	1.91	.96523	2.41	1.25034	2.91	1.84359
1.42	.88633	1.92	.96877	2.42	1.25863	2.92	1.86005
1.43	.88594	1.93	.97240	2.43	1.26703	2.93	1.87673
1.44	.88558	1.94	.97610	2.44	1.27554	2.94	1.89363
1.45	.88526	1.95	.97988	2.45	1.28420	2.95	1.91077
1.46	.88496	1.96	.98374	2.46	1.29298	2.96	1.92814
1.47	.88469	1.97	.98769	2.47	1.30188	2.97	1.94574
1.48	.88445	1.98	.99171	2.48	1.31091	2.98	1.96358
1.49	.88423	1.99	.99581	2.49	1.32006	2.99	1.98167
1.50	.88403	2.00	1	2.50	1.32934	3.00	2

### Perhitungan Manual Keandalan

Distribusi yang digunakan adalah distribusi 3 parameter lognormal dengan parameter :

$$\text{Location} = \mu = 2.92418$$

$$\text{Scale} = \sigma = 1.80656$$

$$\text{Threshold} = \lambda = -1.03363$$

#### *Probability Distribution Function (PDF):*

$$f(t) = \frac{1}{\sigma(t - \lambda)\sqrt{2\pi}} \exp\left\{-\frac{[\ln(t - \lambda) - \mu]^2}{2\sigma^2}\right\}$$

$$f(t) = \frac{1}{1.80656 (t - (-1.03363))\sqrt{2\pi}} \exp\left\{-\frac{[\ln(t - (-1.03363)) - 2.94218]^2}{2(1.80656)^2}\right\}$$

$$f(t) = \frac{1}{1.80656 (t + 1.03363)\sqrt{2\pi}} \exp\left\{-\frac{[\ln(t + 1.03363) - 2.94218]^2}{2(1.80656)^2}\right\}$$

$$f(t) = \frac{1}{4.528(t + 1.03363)} \exp\left\{-\frac{[\ln(t + 1.03363) - 2.94218]^2}{6.5273}\right\}$$

**Cumulative Distribution Function (CDF) :**

$$F(t) = \Phi\left(\frac{\ln(t - \lambda) - \mu}{\sigma}\right)$$

Untuk  $t=365$  hari (1 tahun)

$$\begin{aligned} F(365) &= \Phi\left(\frac{\ln(365 - (-1.03363)) - 2.9418}{1.80656}\right) \\ &= \Phi(1.64) \end{aligned}$$

Lalu dari tabel pada halaman Lampiran-7 , lihat nilai  $z = 1.64$ , maka nilai  $\Phi ( 1 . 64 )$  adalah

$$F(t) = 0.9495$$

Maka, keandalannya adalah :

$$\begin{aligned} R &= 1 - F(t) \\ &= 1 - 0.9495 \\ &= 0.0505 \\ &= 5.05\% \end{aligned}$$

Lalu dari tabel pada halaman Lampiran-3 , untuk nilai  $z = -3.35$ , maka nilai  $\Phi (-3.35 )$  adalah

$$F(t) = 0.0004$$

Maka, keandalannya adalah :

$$R = 1 - F(t)$$

$$= 1 - 0.0004$$

$$= 0.9996$$

$$= 99.96\%$$

APPENDIX: Statistical and Numerical Tables

TABLE A.1  
Standardized normal probabilities:  $\Phi(z) = \int_{-\infty}^z (1/\sqrt{2\pi}) e^{-y^2/2} dy$

z	$\Phi(z)$	$1 - \Phi(z)$	z	$\Phi(z)$	$1 - \Phi(z)$	z	$\Phi(z)$	$1 - \Phi(z)$
-3.10000	0.00017	0.99983	-3.31000	0.00022	0.99978	-1.12000	0.18126	0.99874
-3.15000	0.00017	0.99983	-3.36000	0.00023	0.99977	-1.11000	0.18131	0.99869
-3.20000	0.00017	0.99983	-3.41000	0.00024	0.99976	-1.10000	0.18135	0.99865
-3.25000	0.00014	0.99986	-3.46000	0.00025	0.99975	-1.09000	0.18139	0.99861
-3.30000	0.00014	0.99986	-3.51000	0.00026	0.99974	-1.08000	0.18144	0.99856
-3.35000	0.00014	0.99986	-3.56000	0.00027	0.99973	-1.07000	0.18149	0.99851
-3.40000	0.00014	0.99986	-3.61000	0.00028	0.99972	-1.06000	0.18154	0.99846
-3.45000	0.00015	0.99985	-3.66000	0.00029	0.99971	-1.05000	0.18159	0.99841
-3.50000	0.00015	0.99985	-3.71000	0.00030	0.99970	-1.04000	0.18164	0.99836
-3.55000	0.00015	0.99985	-3.76000	0.00031	0.99969	-1.03000	0.18169	0.99831
-3.60000	0.00015	0.99985	-3.81000	0.00032	0.99968	-1.02000	0.18175	0.99825
-3.65000	0.00015	0.99985	-3.86000	0.00033	0.99968	-1.01000	0.18181	0.99819
-3.70000	0.00016	0.99984	-3.91000	0.00035	0.99965	-1.00000	0.18187	0.99813
-3.75000	0.00016	0.99984	-3.96000	0.00036	0.99964	-0.99000	0.18193	0.99807
-3.80000	0.00016	0.99984	-4.01000	0.00038	0.99962	-0.98000	0.18199	0.99801
-3.85000	0.00017	0.99983	-4.06000	0.00039	0.99961	-0.97000	0.18205	0.99795
-3.90000	0.00017	0.99983	-4.11000	0.00040	0.99960	-0.96000	0.18212	0.99789
-3.95000	0.00017	0.99983	-4.16000	0.00042	0.99958	-0.95000	0.18219	0.99783
-4.00000	0.00017	0.99983	-4.21000	0.00043	0.99957	-0.94000	0.18226	0.99777
-4.05000	0.00017	0.99983	-4.26000	0.00045	0.99955	-0.93000	0.18233	0.99771
-4.10000	0.00017	0.99983	-4.31000	0.00047	0.99953	-0.92000	0.18240	0.99765
-4.15000	0.00018	0.99982	-4.36000	0.00048	0.99952	-0.91000	0.18248	0.99759
-4.20000	0.00018	0.99982	-4.41000	0.00050	0.99950	-0.90000	0.18255	0.99753
-4.25000	0.00018	0.99982	-4.46000	0.00052	0.99948	-0.89000	0.18264	0.99746
-4.30000	0.00018	0.99982	-4.51000	0.00054	0.99946	-0.88000	0.18272	0.99739
-4.35000	0.00019	0.99981	-4.56000	0.00056	0.99944	-0.87000	0.18280	0.99732
-4.40000	0.00019	0.99981	-4.61000	0.00058	0.99942	-0.86000	0.18289	0.99725
-4.45000	0.00019	0.99981	-4.66000	0.00060	0.99940	-0.85000	0.18298	0.99718
-4.50000	0.00019	0.99981	-4.71000	0.00062	0.99938	-0.84000	0.18307	0.99711
-4.55000	0.00020	0.99980	-4.76000	0.00064	0.99936	-0.83000	0.18317	0.99704
-4.60000	0.00020	0.99980	-4.81000	0.00066	0.99934	-0.82000	0.18326	0.99697
-4.65000	0.00020	0.99980	-4.86000	0.00069	0.99931	-0.81000	0.18336	0.99690
-4.70000	0.00020	0.99980	-4.91000	0.00071	0.99929	-0.80000	0.18347	0.99683
-4.75000	0.00021	0.99979	-4.96000	0.00074	0.99926	-0.79000	0.18357	0.99676
-4.80000	0.00021	0.99979	-5.01000	0.00076	0.99924	-0.78000	0.18368	0.99669
-4.85000	0.00021	0.99979	-5.06000	0.00079	0.99921	-0.77000	0.18379	0.99662
-4.90000	0.00021	0.99979	-5.11000	0.00082	0.99918	-0.76000	0.18391	0.99655
-4.95000	0.00021	0.99979	-5.16000	0.00084	0.99916	-0.75000	0.18403	0.99648
-5.00000	0.00021	0.99979	-5.21000	0.00087	0.99913	-0.74000	0.18415	0.99641
-5.05000	0.00021	0.99979	-5.26000	0.00090	0.99910	-0.73000	0.18427	0.99634
-5.10000	0.00021	0.99979	-5.31000	0.00094	0.99906	-0.72000	0.18440	0.99627
-5.15000	0.00021	0.99979	-5.36000	0.00097	0.99903	-0.71000	0.18453	0.99620
-5.20000	0.00021	0.99979	-5.41000	0.00100	0.99900	-0.70000	0.18466	0.99613
-5.25000	0.00021	0.99979	-5.46000	0.00103	0.99897	-0.69000	0.18480	0.99606
-5.30000	0.00021	0.99979	-5.51000	0.00107	0.99893	-0.68000	0.18494	0.99599
-5.35000	0.00021	0.99979	-5.56000	0.00111	0.99889	-0.67000	0.18508	0.99592
-5.40000	0.00021	0.99979	-5.61000	0.00114	0.99886	-0.66000	0.18523	0.99585
-5.45000	0.00021	0.99979	-5.66000	0.00118	0.99882	-0.65000	0.18538	0.99578
-5.50000	0.00022	0.99978	-5.71000	0.00122	0.99878	-0.64000	0.18554	0.99571

(continued)

TABLE A.1 (CONTINUED)

$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$
-2.53000	0.00570	0.99430	-2.03000	0.02118	0.97882	-1.53000	0.06301	0.93699
-2.52000	0.00587	0.99413	-2.02000	0.02169	0.97831	-1.52000	0.06426	0.93574
-2.51000	0.00604	0.99386	-2.01000	0.02222	0.97778	-1.51000	0.06552	0.93448
-2.50000	0.00621	0.99379	-2.00000	0.02275	0.97725	-1.50000	0.06681	0.93319
-2.49000	0.00639	0.99361	-1.99000	0.02330	0.97670	-1.49000	0.06811	0.93189
-2.48000	0.00657	0.99343	-1.98000	0.02385	0.97615	-1.48000	0.06944	0.93056
-2.47000	0.00676	0.99324	-1.97000	0.02442	0.97558	-1.47000	0.07078	0.92922
-2.46000	0.00695	0.99305	-1.96000	0.02500	0.97500	-1.46000	0.07214	0.92786
-2.45000	0.00714	0.99286	-1.95000	0.02559	0.97441	-1.45000	0.07353	0.92647
-2.44000	0.00734	0.99266	-1.94000	0.02619	0.97381	-1.44000	0.07493	0.92507
-2.43000	0.00755	0.99245	-1.93000	0.02680	0.97320	-1.43000	0.07636	0.92364
-2.42000	0.00776	0.99224	-1.92000	0.02743	0.97257	-1.42000	0.07780	0.92220
-2.41000	0.00798	0.99202	-1.91000	0.02807	0.97193	-1.41000	0.07927	0.92073
-2.40000	0.00820	0.99180	-1.90000	0.02873	0.97128	-1.40000	0.08076	0.91924
-2.39000	0.00842	0.99158	-1.89000	0.02938	0.97062	-1.39000	0.08226	0.91774
-2.38000	0.00866	0.99134	-1.88000	0.03005	0.96995	-1.38000	0.08379	0.91623
-2.37000	0.00889	0.99111	-1.87000	0.03074	0.96926	-1.37000	0.08534	0.91466
-2.36000	0.00914	0.99086	-1.86000	0.03144	0.96856	-1.36000	0.08691	0.91303
-2.35000	0.00939	0.99061	-1.85000	0.03216	0.96784	-1.35000	0.08851	0.91149
-2.34000	0.00964	0.99036	-1.84000	0.03288	0.96712	-1.34000	0.09013	0.90988
-2.33000	0.00990	0.99010	-1.83000	0.03362	0.96638	-1.33000	0.09176	0.90824
-2.32000	0.01017	0.98983	-1.82000	0.03438	0.96562	-1.32000	0.09342	0.90658
-2.31000	0.01044	0.98956	-1.81000	0.03515	0.96485	-1.31000	0.09510	0.90490
-2.30000	0.01072	0.98928	-1.80000	0.03593	0.96407	-1.30000	0.09680	0.90320
-2.29000	0.01101	0.98899	-1.79000	0.03673	0.96327	-1.29000	0.09853	0.90147
-2.28000	0.01130	0.98870	-1.78000	0.03754	0.96246	-1.28000	0.10027	0.89973
-2.27000	0.01160	0.98840	-1.77000	0.03836	0.96164	-1.27000	0.10204	0.89796
-2.26000	0.01191	0.98809	-1.76000	0.03920	0.96080	-1.26000	0.10383	0.89617
-2.25000	0.01223	0.98778	-1.75000	0.04006	0.95994	-1.25000	0.10565	0.89435
-2.24000	0.01255	0.98745	-1.74000	0.04093	0.95907	-1.24000	0.10749	0.89251
-2.23000	0.01287	0.98713	-1.73000	0.04182	0.95818	-1.23000	0.10935	0.89065
-2.22000	0.01321	0.98679	-1.72000	0.04272	0.95728	-1.22000	0.11123	0.88877
-2.21000	0.01355	0.98645	-1.71000	0.04363	0.95637	-1.21000	0.11314	0.88686
-2.20000	0.01390	0.98610	-1.70000	0.04457	0.95543	-1.20000	0.11507	0.88493
-2.19000	0.01426	0.98574	-1.69000	0.04551	0.95449	-1.19000	0.11702	0.88298
-2.18000	0.01463	0.98537	-1.68000	0.04648	0.95352	-1.18000	0.11900	0.88103
-2.17000	0.01500	0.98500	-1.67000	0.04746	0.95254	-1.17000	0.12100	0.87900
-2.16000	0.01539	0.98461	-1.66000	0.04846	0.95154	-1.16000	0.12302	0.87698
-2.15000	0.01578	0.98422	-1.65000	0.04947	0.95053	-1.15000	0.12507	0.87493
-2.14000	0.01618	0.98382	-1.64000	0.05050	0.94950	-1.14000	0.12714	0.87286
-2.13000	0.01659	0.98341	-1.63000	0.05155	0.94845	-1.13000	0.12924	0.87076
-2.12000	0.01700	0.98300	-1.62000	0.05262	0.94738	-1.12000	0.13136	0.86864
-2.11000	0.01743	0.98257	-1.61000	0.05370	0.94630	-1.11000	0.13350	0.86650
-2.10000	0.01786	0.98214	-1.60000	0.05480	0.94520	-1.10000	0.13567	0.86433
-2.09000	0.01831	0.98169	-1.59000	0.05592	0.94408	-1.09000	0.13786	0.86214
-2.08000	0.01876	0.98124	-1.58000	0.05705	0.94295	-1.08000	0.14007	0.85993
-2.07000	0.01923	0.98077	-1.57000	0.05821	0.94179	-1.07000	0.14231	0.85769
-2.06000	0.01970	0.98030	-1.56000	0.05938	0.94062	-1.06000	0.14457	0.85543
-2.05000	0.02018	0.97982	-1.55000	0.06057	0.93943	-1.05000	0.14686	0.85314
-2.04000	0.02067	0.97933	-1.54000	0.06178	0.93822	-1.04000	0.14917	0.85083

(continued)

## APPENDIX - Statistical and Numerical Tables

TABLE A.1 (CONTINUED)

$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$
-1.03000	0.15150	0.84850	-0.53000	0.29806	0.70194	-0.03000	0.48803	0.51197
-1.02000	0.15388	0.84612	-0.52000	0.30153	0.69847	-0.02000	0.49300	0.50700
-1.01000	0.15625	0.84375	-0.51000	0.30503	0.69497	-0.01000	0.49791	0.50209
-1.00000	0.15864	0.84136	-0.50000	0.30854	0.69146	0.00000	0.50000	0.50000
-0.99000	0.16104	0.83891	-0.49000	0.31207	0.68793	0.01000	0.50399	0.49601
-0.98000	0.16344	0.83646	-0.48000	0.31561	0.68439	0.02000	0.50798	0.49202
-0.97000	0.16587	0.83403	-0.47000	0.31918	0.68083	0.03000	0.51197	0.48803
-0.96000	0.16833	0.83167	-0.46000	0.32276	0.67724	0.04000	0.51593	0.48405
-0.95000	0.17081	0.82934	-0.45000	0.32636	0.67364	0.05000	0.51984	0.48006
-0.94000	0.17331	0.82703	-0.44000	0.32997	0.67003	0.06000	0.52372	0.47606
-0.93000	0.17583	0.82478	-0.43000	0.33360	0.66641	0.07000	0.52758	0.47210
-0.92000	0.17837	0.82257	-0.42000	0.33724	0.66278	0.08000	0.53143	0.46812
-0.91000	0.18093	0.82040	-0.41000	0.34091	0.65914	0.09000	0.53526	0.46414
-0.90000	0.18351	0.81827	-0.40000	0.34458	0.65542	0.10000	0.53908	0.46017
-0.89000	0.18611	0.81617	-0.39000	0.34827	0.65173	0.11000	0.54288	0.45620
-0.88000	0.18873	0.81410	-0.38000	0.35197	0.64805	0.12000	0.54667	0.45224
-0.87000	0.19137	0.81207	-0.37000	0.35569	0.64431	0.13000	0.55043	0.44828
-0.86000	0.19403	0.81007	-0.36000	0.35943	0.64058	0.14000	0.55417	0.44433
-0.85000	0.19671	0.80810	-0.35000	0.36317	0.63683	0.15000	0.55789	0.44038
-0.84000	0.19941	0.80617	-0.34000	0.36693	0.63307	0.16000	0.56159	0.43644
-0.83000	0.20213	0.79433	-0.33000	0.37070	0.62930	0.17000	0.56528	0.43251
-0.82000	0.20487	0.79251	-0.32000	0.37448	0.62552	0.18000	0.56895	0.42858
-0.81000	0.20763	0.79073	-0.31000	0.37828	0.62173	0.19000	0.57261	0.42465
-0.80000	0.21041	0.78900	-0.30000	0.38209	0.61791	0.20000	0.57626	0.42074
-0.79000	0.21321	0.78731	-0.29000	0.38591	0.61409	0.21000	0.57989	0.41683
-0.78000	0.21603	0.78567	-0.28000	0.38974	0.61026	0.22000	0.58350	0.41294
-0.77000	0.21887	0.78408	-0.27000	0.39358	0.60642	0.23000	0.58709	0.40905
-0.76000	0.22173	0.78254	-0.26000	0.39743	0.60257	0.24000	0.59065	0.40517
-0.75000	0.22461	0.78105	-0.25000	0.40129	0.59871	0.25000	0.59419	0.40129
-0.74000	0.22751	0.77961	-0.24000	0.40517	0.59473	0.26000	0.60023	0.39743
-0.73000	0.23043	0.77821	-0.23000	0.40905	0.59079	0.27000	0.60626	0.39358
-0.72000	0.23337	0.77684	-0.22000	0.41294	0.58706	0.28000	0.61026	0.38974
-0.71000	0.23633	0.77551	-0.21000	0.41683	0.58317	0.29000	0.61409	0.38591
-0.70000	0.23931	0.77421	-0.20000	0.42074	0.57926	0.30000	0.61791	0.38209
-0.69000	0.24231	0.77293	-0.19000	0.42465	0.57535	0.31000	0.62172	0.37828
-0.68000	0.24533	0.77167	-0.18000	0.42858	0.57142	0.32000	0.62552	0.37448
-0.67000	0.24837	0.77043	-0.17000	0.43251	0.56750	0.33000	0.62930	0.37070
-0.66000	0.25143	0.76921	-0.16000	0.43644	0.56356	0.34000	0.63307	0.36693
-0.65000	0.25451	0.76801	-0.15000	0.44038	0.55962	0.35000	0.63683	0.36317
-0.64000	0.25761	0.76683	-0.14000	0.44433	0.55567	0.36000	0.64058	0.35942
-0.63000	0.26073	0.76567	-0.13000	0.44828	0.55172	0.37000	0.64431	0.35569
-0.62000	0.26387	0.76453	-0.12000	0.45224	0.54776	0.38000	0.64803	0.35197
-0.61000	0.26703	0.76341	-0.11000	0.45620	0.54380	0.39000	0.65173	0.34821
-0.60000	0.27021	0.76231	-0.10000	0.46017	0.53983	0.40000	0.65542	0.34445
-0.59000	0.27341	0.76123	-0.09000	0.46414	0.53586	0.41000	0.65909	0.34070
-0.58000	0.27663	0.76017	-0.08000	0.46812	0.53188	0.42000	0.66276	0.33724
-0.57000	0.27987	0.75913	-0.07000	0.47210	0.52790	0.43000	0.66640	0.33360
-0.56000	0.28313	0.75811	-0.06000	0.47608	0.52392	0.44000	0.67003	0.32997
-0.55000	0.28641	0.75711	-0.05000	0.48006	0.51994	0.45000	0.67364	0.32636
-0.54000	0.28971	0.75613	-0.04000	0.48405	0.51595	0.46000	0.67724	0.32276

(continued)

TABLE A.1 (CONTINUED)

$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$
0.43000	0.66882	0.33118	0.97000	0.83398	0.16602	1.47000	0.92922	0.07078
0.48000	0.68439	0.31561	0.98000	0.83546	0.16454	1.48000	0.93056	0.06944
0.49000	0.68793	0.31207	0.99000	0.83691	0.16309	1.49000	0.93189	0.06811
0.50000	0.69146	0.30854	1.00000	0.84134	0.15866	1.50000	0.93319	0.06681
0.51000	0.69497	0.30503	1.01000	0.84375	0.15625	1.51000	0.93448	0.06552
0.52000	0.69847	0.30153	1.02000	0.84614	0.15386	1.52000	0.93574	0.06426
0.53000	0.70194	0.29806	1.03000	0.84850	0.15150	1.53000	0.93699	0.06301
0.54000	0.70540	0.29460	1.04000	0.85083	0.14917	1.54000	0.93822	0.06178
0.55000	0.70884	0.29116	1.05000	0.85314	0.14686	1.55000	0.93943	0.06057
0.56000	0.71226	0.28774	1.06000	0.85543	0.14457	1.56000	0.94062	0.05938
0.57000	0.71566	0.28434	1.07000	0.85769	0.14231	1.57000	0.94179	0.05821
0.58000	0.71904	0.28096	1.08000	0.85993	0.14007	1.58000	0.94295	0.05705
0.59000	0.72240	0.27760	1.09000	0.86214	0.13786	1.59000	0.94408	0.05592
0.60000	0.72575	0.27425	1.10000	0.86433	0.13567	1.60000	0.94520	0.05480
0.61000	0.72907	0.27093	1.11000	0.86650	0.13350	1.61000	0.94630	0.05370
0.62000	0.73237	0.26763	1.12000	0.86864	0.13136	1.62000	0.94738	0.05262
0.63000	0.73565	0.26435	1.13000	0.87076	0.12924	1.63000	0.94843	0.05155
0.64000	0.73891	0.26109	1.14000	0.87286	0.12714	1.64000	0.94950	0.05050
0.65000	0.74215	0.25785	1.15000	0.87493	0.12507	1.65000	0.95053	0.04947
0.66000	0.74537	0.25463	1.16000	0.87698	0.12302	1.66000	0.95154	0.04846
0.67000	0.74857	0.25143	1.17000	0.87900	0.12100	1.67000	0.95254	0.04746
0.68000	0.75175	0.24825	1.18000	0.88100	0.11900	1.68000	0.95352	0.04648
0.69000	0.75490	0.24510	1.19000	0.88298	0.11702	1.69000	0.95449	0.04551
0.70000	0.75804	0.24196	1.20000	0.88493	0.11507	1.70000	0.95543	0.04457
0.71000	0.76115	0.23885	1.21000	0.88686	0.11314	1.71000	0.95637	0.04363
0.72000	0.76424	0.23576	1.22000	0.88877	0.11123	1.72000	0.95728	0.04272
0.73000	0.76731	0.23270	1.23000	0.89065	0.10935	1.73000	0.95818	0.04182
0.74000	0.77035	0.22965	1.24000	0.89251	0.10749	1.74000	0.95907	0.04093
0.75000	0.77337	0.22663	1.25000	0.89435	0.10565	1.75000	0.95994	0.04006
0.76000	0.77637	0.22363	1.26000	0.89617	0.10383	1.76000	0.96080	0.03920
0.77000	0.77935	0.22065	1.27000	0.89796	0.10204	1.77000	0.96164	0.03836
0.78000	0.78230	0.21770	1.28000	0.89973	0.10027	1.78000	0.96246	0.03754
0.79000	0.78524	0.21476	1.29000	0.90147	0.09853	1.79000	0.96327	0.03673
0.80000	0.78814	0.21186	1.30000	0.90320	0.09680	1.80000	0.96407	0.03593
0.81000	0.79103	0.20897	1.31000	0.90490	0.09510	1.81000	0.96485	0.03515
0.82000	0.79389	0.20611	1.32000	0.90658	0.09342	1.82000	0.96562	0.03438
0.83000	0.79673	0.20327	1.33000	0.90824	0.09176	1.83000	0.96638	0.03362
0.84000	0.79955	0.20045	1.34000	0.90988	0.09012	1.84000	0.96712	0.03288
0.85000	0.80234	0.19766	1.35000	0.91149	0.08851	1.85000	0.96784	0.03216
0.86000	0.80511	0.19489	1.36000	0.91309	0.08691	1.86000	0.96856	0.03144
0.87000	0.80785	0.19215	1.37000	0.91466	0.08534	1.87000	0.96926	0.03074
0.88000	0.81057	0.18943	1.38000	0.91621	0.08379	1.88000	0.96995	0.03005
0.89000	0.81327	0.18673	1.39000	0.91774	0.08226	1.89000	0.97063	0.02938
0.90000	0.81594	0.18406	1.40000	0.91924	0.08076	1.90000	0.97128	0.02872
0.91000	0.81859	0.18141	1.41000	0.92073	0.07927	1.91000	0.97193	0.02807
0.92000	0.82121	0.17879	1.42000	0.92220	0.07780	1.92000	0.97257	0.02743
0.93000	0.82381	0.17619	1.43000	0.92364	0.07636	1.93000	0.97320	0.02680
0.94000	0.82639	0.17361	1.44000	0.92507	0.07493	1.94000	0.97381	0.02619
0.95000	0.82894	0.17106	1.45000	0.92647	0.07353	1.95000	0.97441	0.02559
0.96000	0.83147	0.16853	1.46000	0.92786	0.07214	1.96000	0.97500	0.02500

(continued)



APPENDIX Statistical and Numerical Tables

TABLE A.1 (CONTINUED)

$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$
1.97000	0.97558	0.02442	2.47000	0.99324	0.00676	2.97000	0.99851	0.00149
1.98000	0.97615	0.02385	2.48000	0.99343	0.00657	2.98000	0.99856	0.00144
1.99000	0.97670	0.02330	2.49000	0.99361	0.00639	2.99000	0.99861	0.00139
2.00000	0.97725	0.02275	2.50000	0.99379	0.00621	3.00000	0.99865	0.00135
2.01000	0.97778	0.02222	2.51000	0.99396	0.00604	3.01000	0.99869	0.00131
2.02000	0.97831	0.02169	2.52000	0.99413	0.00587	3.02000	0.99874	0.00126
2.03000	0.97882	0.02116	2.53000	0.99430	0.00570	3.03000	0.99878	0.00122
2.04000	0.97933	0.02067	2.54000	0.99446	0.00554	3.04000	0.99882	0.00118
2.05000	0.97982	0.02018	2.55000	0.99461	0.00539	3.05000	0.99886	0.00114
2.06000	0.98030	0.01970	2.56000	0.99477	0.00525	3.06000	0.99889	0.00111
2.07000	0.98077	0.01923	2.57000	0.99492	0.00510	3.07000	0.99893	0.00107
2.08000	0.98124	0.01876	2.58000	0.99506	0.00494	3.08000	0.99897	0.00103
2.09000	0.98169	0.01831	2.59000	0.99520	0.00480	3.09000	0.99900	0.00100
2.10000	0.98214	0.01786	2.60000	0.99534	0.00466	3.10000	0.99903	0.00097
2.11000	0.98257	0.01743	2.61000	0.99547	0.00453	3.11000	0.99906	0.00094
2.12000	0.98300	0.01700	2.62000	0.99560	0.00440	3.12000	0.99910	0.00090
2.13000	0.98341	0.01659	2.63000	0.99573	0.00427	3.13000	0.99913	0.00087
2.14000	0.98382	0.01618	2.64000	0.99585	0.00415	3.14000	0.99916	0.00084
2.15000	0.98422	0.01578	2.65000	0.99598	0.00403	3.15000	0.99918	0.00082
2.16000	0.98461	0.01539	2.66000	0.99609	0.00391	3.16000	0.99921	0.00079
2.17000	0.98500	0.01500	2.67000	0.99621	0.00379	3.17000	0.99924	0.00076
2.18000	0.98537	0.01463	2.68000	0.99632	0.00368	3.18000	0.99926	0.00074
2.19000	0.98574	0.01426	2.69000	0.99643	0.00357	3.19000	0.99929	0.00071
2.20000	0.98610	0.01390	2.70000	0.99653	0.00347	3.20000	0.99931	0.00069
2.21000	0.98645	0.01355	2.71000	0.99664	0.00338	3.21000	0.99934	0.00066
2.22000	0.98679	0.01321	2.72000	0.99674	0.00328	3.22000	0.99936	0.00064
2.23000	0.98713	0.01287	2.73000	0.99683	0.00317	3.23000	0.99938	0.00062
2.24000	0.98745	0.01255	2.74000	0.99693	0.00307	3.24000	0.99940	0.00060
2.25000	0.98778	0.01222	2.75000	0.99702	0.00298	3.25000	0.99942	0.00058
2.26000	0.98809	0.01191	2.76000	0.99711	0.00289	3.26000	0.99944	0.00056
2.27000	0.98840	0.01160	2.77000	0.99720	0.00280	3.27000	0.99946	0.00054
2.28000	0.98870	0.01130	2.78000	0.99728	0.00272	3.28000	0.99948	0.00052
2.29000	0.98899	0.01101	2.79000	0.99736	0.00264	3.29000	0.99950	0.00050
2.30000	0.98928	0.01072	2.80000	0.99745	0.00255	3.30000	0.99952	0.00048
2.31000	0.98956	0.01044	2.81000	0.99752	0.00248	3.31000	0.99953	0.00047
2.32000	0.98983	0.01017	2.82000	0.99760	0.00240	3.32000	0.99955	0.00045
2.33000	0.99010	0.00990	2.83000	0.99767	0.00233	3.33000	0.99957	0.00043
2.34000	0.99036	0.00964	2.84000	0.99774	0.00226	3.34000	0.99958	0.00042
2.35000	0.99061	0.00939	2.85000	0.99781	0.00219	3.35000	0.99960	0.00040
2.36000	0.99086	0.00914	2.86000	0.99788	0.00212	3.36000	0.99961	0.00039
2.37000	0.99111	0.00889	2.87000	0.99795	0.00205	3.37000	0.99962	0.00038
2.38000	0.99134	0.00866	2.88000	0.99801	0.00199	3.38000	0.99964	0.00036
2.39000	0.99158	0.00842	2.89000	0.99807	0.00193	3.39000	0.99965	0.00035
2.40000	0.99180	0.00820	2.90000	0.99813	0.00187	3.40000	0.99966	0.00034
2.41000	0.99202	0.00798	2.91000	0.99819	0.00181	3.41000	0.99968	0.00032
2.42000	0.99224	0.00776	2.92000	0.99825	0.00175	3.42000	0.99969	0.00031
2.43000	0.99245	0.00755	2.93000	0.99831	0.00169	3.43000	0.99970	0.00030
2.44000	0.99266	0.00734	2.94000	0.99836	0.00164	3.44000	0.99971	0.00029
2.45000	0.99286	0.00714	2.95000	0.99841	0.00159	3.45000	0.99972	0.00028
2.46000	0.99305	0.00695	2.96000	0.99846	0.00154	3.46000	0.99973	0.00027

(continued)

## Statistical and Numerical Tables

TABLE A.1 (CONTINUED)

$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$	$z$	$\Phi(z)$	$1 - \Phi(z)$
3.47000	0.99974	0.00026	3.65000	0.99987	0.00013	3.83000	0.99994	0.00006
3.48000	0.99975	0.00025	3.66000	0.99987	0.00013	3.84000	0.99994	0.00006
3.49000	0.99976	0.00024	3.67000	0.99988	0.00012	3.85000	0.99994	0.00006
3.50000	0.99977	0.00023	3.68000	0.99988	0.00012	3.86000	0.99994	0.00006
3.51000	0.99978	0.00022	3.69000	0.99989	0.00011	3.87000	0.99995	0.00005
3.52000	0.99978	0.00022	3.70000	0.99989	0.00011	3.88000	0.99995	0.00005
3.53000	0.99979	0.00021	3.71000	0.99990	0.00010	3.89000	0.99995	0.00005
3.54000	0.99980	0.00020	3.72000	0.99990	0.00010	3.90000	0.99995	0.00005
3.55000	0.99981	0.00019	3.73000	0.99990	0.00010	3.91000	0.99995	0.00005
3.56000	0.99981	0.00019	3.74000	0.99991	0.00009	3.92000	0.99995	0.00005
3.57000	0.99982	0.00018	3.75000	0.99991	0.00009	3.93000	0.99996	0.00004
3.58000	0.99983	0.00017	3.76000	0.99992	0.00008	3.94000	0.99996	0.00004
3.59000	0.99983	0.00017	3.77000	0.99992	0.00008	3.95000	0.99996	0.00004
3.60000	0.99984	0.00016	3.78000	0.99992	0.00008	3.96000	0.99996	0.00004
3.61000	0.99985	0.00015	3.79000	0.99993	0.00007	3.97000	0.99996	0.00004
3.62000	0.99985	0.00015	3.80000	0.99993	0.00007	3.98000	0.99996	0.00004
3.63000	0.99986	0.00014	3.81000	0.99993	0.00007	3.99000	0.99997	0.00003
3.64000	0.99986	0.00014	3.82000	0.99995	0.00005	4.00000	0.99997	0.00003

006 Manufacture Organization Chart – (Group & Part)

Head Name	TV Business		Ref Business		Total	
	T/O	Acct	T/O	Acct	T/O	Acct
FSE	6	6	6	6	12	12
Group	9	5	6	4	15	9
Part	22	18	18	14	40	31
Total	37	29	30	24	67	53



President  
Mr. K.J. Lee

