

Table A.3 Cumulative Normal Distribution

$$\Phi(z_\alpha) = \int_{-\infty}^{z_\alpha} \frac{1}{\sqrt{2\pi}} e^{-u^2/2} du = 1 - \alpha$$



z_α	0.00	0.01	0.02	0.03	0.04	z_α
0.0	0.5000	0.5039	0.5079	0.5119	0.5159	0.0
0.1	0.5398	0.5438	0.5477	0.5517	0.5557	0.1
0.2	0.5793	0.5833	0.5873	0.5913	0.5943	0.2
0.3	0.6179	0.6219	0.6259	0.6299	0.6339	0.3
0.4	0.6554	0.6594	0.6634	0.6674	0.6714	0.4
0.5	0.6915	0.6955	0.6995	0.7035	0.7075	0.5
0.6	0.7257	0.7297	0.7337	0.7377	0.7417	0.6
0.7	0.7580	0.7620	0.7660	0.7700	0.7740	0.7
0.8	0.7881	0.7921	0.7961	0.8001	0.8041	0.8
0.9	0.8159	0.8199	0.8239	0.8279	0.8319	0.9
1.0	0.8438	0.8478	0.8518	0.8558	0.8598	1.0
1.1	0.8698	0.8738	0.8778	0.8818	0.8858	1.1
1.2	0.8849	0.8889	0.8929	0.8969	0.9009	1.2
1.3	0.9032	0.9072	0.9112	0.9152	0.9192	1.3
1.4	0.9192	0.9232	0.9272	0.9312	0.9352	1.4
1.5	0.9332	0.9372	0.9412	0.9452	0.9492	1.5
1.6	0.9452	0.9492	0.9532	0.9572	0.9612	1.6
1.7	0.9553	0.9593	0.9633	0.9673	0.9713	1.7
1.8	0.9641	0.9681	0.9721	0.9761	0.9801	1.8
1.9	0.9772	0.9812	0.9852	0.9892	0.9932	1.9
2.0	0.9772	0.9812	0.9852	0.9892	0.9932	2.0
2.1	0.9824	0.9864	0.9904	0.9944	0.9984	2.1
2.2	0.9864	0.9904	0.9944	0.9984	0.9996	2.2
2.3	0.9892	0.9932	0.9972	0.9992	0.9996	2.3
2.4	0.9918	0.9958	0.9992	0.9996	0.9996	2.4
2.5	0.9932	0.9972	0.9992	0.9996	0.9996	2.5
2.6	0.9944	0.9984	0.9996	0.9996	0.9996	2.6
2.7	0.9956	0.9996	0.9996	0.9996	0.9996	2.7
2.8	0.9968	0.9996	0.9996	0.9996	0.9996	2.8
2.9	0.9979	0.9996	0.9996	0.9996	0.9996	2.9
3.0	0.9988	0.9996	0.9996	0.9996	0.9996	3.0
3.1	0.9993	0.9996	0.9996	0.9996	0.9996	3.1
3.2	0.9996	0.9996	0.9996	0.9996	0.9996	3.2
3.3	0.9997	0.9996	0.9996	0.9996	0.9996	3.3
3.4	0.9998	0.9996	0.9996	0.9996	0.9996	3.4
3.5	0.9999	0.9996	0.9996	0.9996	0.9996	3.5
3.6	0.9999	0.9996	0.9996	0.9996	0.9996	3.6
3.7	0.9999	0.9996	0.9996	0.9996	0.9996	3.7
3.8	0.9999	0.9996	0.9996	0.9996	0.9996	3.8
3.9	0.9999	0.9996	0.9996	0.9996	0.9996	3.9

Table A.3 Continued

z_α	0.05	0.06	0.07	0.08	0.09	z_α
0.0	0.5199	0.5239	0.5279	0.5319	0.5359	0.0
0.1	0.5596	0.5636	0.5676	0.5716	0.5756	0.1
0.2	0.5987	0.6027	0.6067	0.6107	0.6147	0.2
0.3	0.6368	0.6408	0.6448	0.6488	0.6528	0.3
0.4	0.6736	0.6776	0.6816	0.6856	0.6896	0.4
0.5	0.7088	0.7128	0.7168	0.7208	0.7248	0.5
0.6	0.7421	0.7461	0.7501	0.7541	0.7581	0.6
0.7	0.7733	0.7773	0.7813	0.7853	0.7893	0.7
0.8	0.8023	0.8063	0.8103	0.8143	0.8183	0.8
0.9	0.8244	0.8284	0.8324	0.8364	0.8404	0.9
1.0	0.8534	0.8574	0.8614	0.8654	0.8694	1.0
1.1	0.8749	0.8789	0.8829	0.8869	0.8909	1.1
1.2	0.8944	0.8984	0.9024	0.9064	0.9104	1.2
1.3	0.9119	0.9159	0.9199	0.9239	0.9279	1.3
1.4	0.9266	0.9306	0.9346	0.9386	0.9426	1.4
1.5	0.9439	0.9479	0.9519	0.9559	0.9599	1.5
1.6	0.9608	0.9648	0.9688	0.9728	0.9768	1.6
1.7	0.9778	0.9818	0.9858	0.9898	0.9938	1.7
1.8	0.9948	0.9988	0.9992	0.9996	0.9996	1.8
1.9	0.9979	0.9996	0.9996	0.9996	0.9996	1.9
2.0	0.9988	0.9996	0.9996	0.9996	0.9996	2.0
2.1	0.9993	0.9996	0.9996	0.9996	0.9996	2.1
2.2	0.9996	0.9996	0.9996	0.9996	0.9996	2.2
2.3	0.9997	0.9996	0.9996	0.9996	0.9996	2.3
2.4	0.9998	0.9996	0.9996	0.9996	0.9996	2.4
2.5	0.9999	0.9996	0.9996	0.9996	0.9996	2.5
2.6	0.9999	0.9996	0.9996	0.9996	0.9996	2.6
2.7	0.9999	0.9996	0.9996	0.9996	0.9996	2.7
2.8	0.9999	0.9996	0.9996	0.9996	0.9996	2.8
2.9	0.9999	0.9996	0.9996	0.9996	0.9996	2.9
3.0	0.9999	0.9996	0.9996	0.9996	0.9996	3.0
3.1	0.9999	0.9996	0.9996	0.9996	0.9996	3.1
3.2	0.9999	0.9996	0.9996	0.9996	0.9996	3.2
3.3	0.9999	0.9996	0.9996	0.9996	0.9996	3.3
3.4	0.9999	0.9996	0.9996	0.9996	0.9996	3.4
3.5	0.9999	0.9996	0.9996	0.9996	0.9996	3.5
3.6	0.9999	0.9996	0.9996	0.9996	0.9996	3.6
3.7	0.9999	0.9996	0.9996	0.9996	0.9996	3.7
3.8	0.9999	0.9996	0.9996	0.9996	0.9996	3.8
3.9	0.9999	0.9996	0.9996	0.9996	0.9996	3.9

