

附表

標準常態分配之累積機率值

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-3.5	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
-3.4	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
-3.3	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
-3.2	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005
-3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
-3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
-2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
-2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
-2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
-2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
-2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
-2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
-2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
-2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
-2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
-2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
-1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
-1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294

標準常態分配之累積機率值（續）

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
-1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
-1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
-1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
-1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
-1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
-1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
-0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
-0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
-0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
-0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
-0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
-0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
-0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
-0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
-0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
-0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641

標準常態分配之累積機率值（續）

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.5000	0.5040	0.5080	0.5120	0.5160	0.5199	0.5239	0.5279	0.5319	0.5359
0.1	0.5398	0.5438	0.5478	0.5517	0.5557	0.5596	0.5636	0.5675	0.5714	0.5753
0.2	0.5793	0.5832	0.5871	0.5910	0.5948	0.5987	0.6026	0.6064	0.6103	0.6141
0.3	0.6179	0.6217	0.6255	0.6293	0.6331	0.6368	0.6406	0.6443	0.6480	0.6517
0.4	0.6554	0.6591	0.6628	0.6664	0.6700	0.6736	0.6772	0.6808	0.6844	0.6879
0.5	0.6915	0.6950	0.6985	0.7019	0.7054	0.7088	0.7123	0.7157	0.7190	0.7224
0.6	0.7257	0.7291	0.7324	0.7357	0.7389	0.7422	0.7454	0.7486	0.7517	0.7549
0.7	0.7580	0.7611	0.7642	0.7673	0.7704	0.7734	0.7764	0.7794	0.7823	0.7852
0.8	0.7881	0.7910	0.7939	0.7967	0.7995	0.8023	0.8051	0.8078	0.8106	0.8133
0.9	0.8159	0.8186	0.8212	0.8238	0.8264	0.8289	0.8315	0.8340	0.8365	0.8389
1.0	0.8413	0.8438	0.8461	0.8485	0.8508	0.8531	0.8554	0.8577	0.8599	0.8621
1.1	0.8643	0.8665	0.8686	0.8708	0.8729	0.8749	0.8770	0.8790	0.8810	0.8830
1.2	0.8849	0.8869	0.8888	0.8907	0.8925	0.8944	0.8962	0.8980	0.8997	0.9015
1.3	0.9032	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9147	0.9162	0.9177
1.4	0.9192	0.9207	0.9222	0.9236	0.9251	0.9265	0.9279	0.9292	0.9306	0.9319
1.5	0.9332	0.9345	0.9357	0.9370	0.9382	0.9394	0.9406	0.9418	0.9429	0.9441
1.6	0.9452	0.9463	0.9474	0.9484	0.9495	0.9505	0.9515	0.9525	0.9535	0.9545
1.7	0.9554	0.9564	0.9573	0.9582	0.9591	0.9599	0.9608	0.9616	0.9625	0.9633

標準常態分配之累積機率值（續）

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1.8	0.9641	0.9649	0.9656	0.9664	0.9671	0.9678	0.9686	0.9693	0.9699	0.9706
1.9	0.9713	0.9719	0.9726	0.9732	0.9738	0.9744	0.9750	0.9756	0.9761	0.9767
2.0	0.9772	0.9778	0.9783	0.9788	0.9793	0.9798	0.9803	0.9808	0.9812	0.9817
2.1	0.9821	0.9826	0.9830	0.9834	0.9838	0.9842	0.9846	0.9850	0.9854	0.9857
2.2	0.9861	0.9864	0.9868	0.9871	0.9875	0.9878	0.9881	0.9884	0.9887	0.9890
2.3	0.9893	0.9896	0.9898	0.9901	0.9904	0.9906	0.9909	0.9911	0.9913	0.9916
2.4	0.9918	0.9920	0.9922	0.9925	0.9927	0.9929	0.9931	0.9932	0.9934	0.9936
2.5	0.9938	0.9940	0.9941	0.9943	0.9945	0.9946	0.9948	0.9949	0.9951	0.9952
2.6	0.9953	0.9955	0.9956	0.9957	0.9959	0.9960	0.9961	0.9962	0.9963	0.9964
2.7	0.9965	0.9966	0.9967	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974
2.8	0.9974	0.9975	0.9976	0.9977	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981
2.9	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986
3.0	0.9987	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990
3.1	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9992	0.9993	0.9993
3.2	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
3.3	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997
3.4	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
3.5	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998

管制界限因子表

樣本數 n	平均數管制圖			標準差管制圖					全距管制圖					中位數管制圖			個別值管制圖		最大值與最小值管制圖
	管制界限		中線	管制界限			中線	管制界限			中線	管制界限			中線	管制界限			
	A	A_2		B_3	B_4	B_5		B_6	d_2	d_3		D_1	D_2	D_3		D_4	m_3A_2	m_3A	
2	2.121	1.880	2.659	0.7979	0	3.267	0	2.606	1.128	0.8525	0	3.686	0	3.267	1.880	2.121	2.660	2.695	
3	1.732	1.023	1.954	0.8862	0	2.568	0	2.276	1.693	0.8884	0	4.358	0	2.574	1.160	2.009	1.772	1.826	
4	1.500	0.729	1.628	0.9213	0	2.266	0	2.088	2.059	0.8798	0	4.698	0	2.282	0.796	1.638	1.457	1.522	
5	1.342	0.577	1.427	0.9400	0	2.089	0	1.964	2.326	0.8641	0	4.918	0	2.114	0.691	1.608	1.290	1.363	
6	1.225	0.483	1.287	0.9515	0.030	1.970	0.029	1.874	2.534	0.8480	0	5.078	0	2.004	0.548	1.135	1.184	1.263	
7	1.134	0.419	1.182	0.9594	0.118	1.882	0.113	1.806	2.704	0.8332	0.204	5.204	0.076	1.924	0.509	1.214	1.109	1.194	
8	1.061	0.373	1.099	0.9650	0.185	1.815	0.179	1.751	2.847	0.8198	0.388	5.306	0.136	1.864	0.433	1.160	1.054	1.143	
9	1.000	0.337	1.032	0.9693	0.239	1.761	0.232	1.707	2.970	0.8078	0.547	5.393	0.184	1.816	0.412	1.223	1.010	1.104	
10	0.949	0.308	0.975	0.9727	0.284	1.716	0.276	1.669	3.078	0.7971	0.687	5.469	0.223	1.777	0.362	1.176	0.975	1.072	
11	0.905	0.285	0.927	0.9754	0.321	1.679	0.313	1.637	3.173	0.7873	0.811	5.535	0.256	1.744			0.946		
12	0.866	0.266	0.886	0.9776	0.354	1.646	0.346	1.610	3.258	0.7785	0.922	5.594	0.283	1.717			0.921		
13	0.832	0.249	0.850	0.9794	0.382	1.618	0.374	1.585	3.336	0.7704	1.025	5.647	0.307	1.693			0.899		
14	0.802	0.235	0.817	0.9810	0.406	1.594	0.399	1.563	3.407	0.7630	1.118	5.696	0.328	1.672			0.881		
15	0.775	0.223	0.789	0.9823	0.428	1.572	0.421	1.544	3.472	0.7562	1.203	5.741	0.347	1.653			0.864		
16	0.750	0.212	0.763	0.9835	0.448	1.552	0.440	1.526	3.532	0.7499	1.282	5.782	0.363	1.637			0.849		
17	0.728	0.203	0.739	0.9845	0.466	1.534	0.458	1.511	3.588	0.7441	1.356	5.820	0.378	1.622			0.836		
18	0.707	0.194	0.718	0.9854	0.482	1.518	0.475	1.496	3.640	0.7386	1.424	5.856	0.391	1.608			0.824		
19	0.688	0.187	0.698	0.9862	0.497	1.503	0.490	1.483	3.689	0.7335	1.487	5.891	0.403	1.597			0.813		
20	0.671	0.180	0.680	0.9869	0.510	1.490	0.504	1.470	3.735	0.7287	1.549	5.921	0.415	1.585			0.803		
21	0.655	0.173	0.663	0.9876	0.523	1.477	0.516	1.459	3.778	0.7242	1.605	5.951	0.425	1.575			0.794		
22	0.640	0.167	0.647	0.9882	0.534	1.466	0.528	1.448	3.819	0.7199	1.659	5.979	0.434	1.566			0.785		
23	0.626	0.162	0.633	0.9887	0.545	1.455	0.539	1.438	3.858	0.7159	1.710	6.006	0.443	1.557			0.778		
24	0.612	0.157	0.619	0.9892	0.555	1.445	0.549	1.429	3.895	0.7121	1.759	6.031	0.451	1.548			0.770		
25	0.600	0.153	0.606	0.9896	0.565	1.435	0.559	1.420	3.931	0.7084	1.806	6.056	0.459	1.541			0.763		

當 $n \geq 25$

$$A = \frac{3}{\sqrt{n}}, A_2 = \frac{3}{d_2\sqrt{n}}, A_3 = \frac{3}{c_4\sqrt{n}}, E_2 = \frac{3}{d_2}$$

$$B_3 = 1 - \frac{3}{c_4}\sqrt{1-d_2^2}, B_4 = 1 + \frac{3}{c_4}\sqrt{1-d_2^2}$$

$$B_5 = c_4 - 3\sqrt{1-d_2^2}, B_6 = c_4 + 3\sqrt{1-d_2^2}$$

$$c_4 = \frac{\Gamma(\frac{n}{2})}{\Gamma(\frac{n-1}{2})} \times \sqrt{\frac{2}{n-1}} = \frac{[(n-2)/2]!}{[(n-3)/2]!} \times \sqrt{\frac{2}{n-1}} = \frac{4(n-1)}{4n-3}$$

$$D_3 = 1 - \frac{3d_2}{d_4}, D_4 = 1 + \frac{3d_2}{d_4}$$

$$D_1 = d_2 - 3d_3, D_2 = d_2 + 3d_3$$