

Standard Normal Probabilities

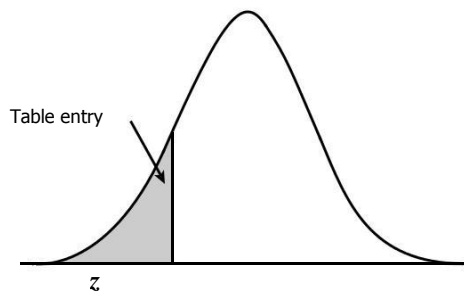


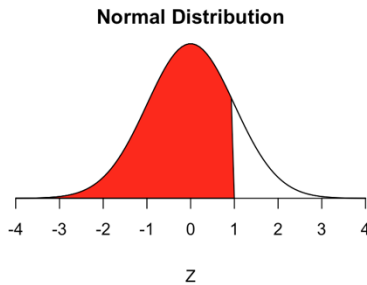
Table entry for z is the area under the standard normal curve to the left of z .

z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
-3.4	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002
-3.3	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0003
-3.2	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005
-3.1	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007
-3.0	.0013	.0013	.0013	.0012	.0012	.0011	.0011	.0011	.0010	.0010
-2.9	.0019	.0018	.0018	.0017	.0016	.0016	.0015	.0015	.0014	.0014
-2.8	.0026	.0025	.0024	.0023	.0023	.0022	.0021	.0021	.0020	.0019
-2.7	.0035	.0034	.0033	.0032	.0031	.0030	.0029	.0028	.0027	.0026
-2.6	.0047	.0045	.0044	.0043	.0041	.0040	.0039	.0038	.0037	.0036
-2.5	.0062	.0060	.0059	.0057	.0055	.0054	.0052	.0051	.0049	.0048
-2.4	.0082	.0080	.0078	.0075	.0073	.0071	.0069	.0068	.0066	.0064
-2.3	.0107	.0104	.0102	.0099	.0096	.0094	.0091	.0089	.0087	.0084
-2.2	.0139	.0136	.0132	.0129	.0125	.0122	.0119	.0116	.0113	.0110
-2.1	.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146	.0143
-2.0	.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188	.0183
-1.9	.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0239	.0233
-1.8	.0359	.0351	.0344	.0336	.0329	.0322	.0314	.0307	.0301	.0294
-1.7	.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375	.0367
-1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455
-1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571	.0559
-1.4	.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694	.0681
-1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
-1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
-1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
-1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
-0.9	.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
-0.8	.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
-0.7	.2420	.2389	.2358	.2327	.2296	.2266	.2236	.2206	.2177	.2148
-0.6	.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
-0.5	.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
-0.4	.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
-0.3	.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
-0.2	.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
-0.1	.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
-0.0	.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641

Using the Standard Normal Table

There are two types of standard normal tables. Before attempting to find either the z-score or the probability on the table, make sure you know which table you are using.

The Cumulative Probability Table

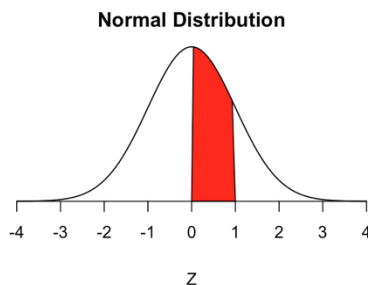


z	+0.00	+0.01	+0.02	+0.03	+0.04	+0.05	+0.06
0.0	0.50000	0.50399	0.50798	0.51197	0.51595	0.51994	0.52392
0.1	0.53983	0.54380	0.54776	0.55172	0.55567	0.55966	0.56360
0.2	0.57926	0.58317	0.58706	0.59095	0.59483	0.59871	0.60257
0.3	0.61791	0.62172	0.62552	0.62930	0.63307	0.63683	0.64058
0.4	0.65542	0.65910	0.66276	0.66640	0.67003	0.67364	0.67724
0.5	0.69146	0.69497	0.69847	0.70194	0.70540	0.70884	0.71226
0.6	0.72575	0.72907	0.73237	0.73565	0.73891	0.74215	0.74537

$p(x \leq z)$
 Area from z to the left

Each entry in the cumulative probability table is the probability of a random variable (x) is less than or equal to a specified value (z), which is illustrated in the graph as the shaded area from the value z to the left.

The Normal Curve Area Table



z	+0.00	+0.01	+0.02	+0.03	+0.04	+0.05	+0.06
0.0	0.00000	0.00399	0.00798	0.01197	0.01595	0.01994	0.02392
0.1	0.03983	0.04380	0.04776	0.05172	0.05567	0.05966	0.06360
0.2	0.07926	0.08317	0.08706	0.09095	0.09483	0.09871	0.10257
0.3	0.11791	0.12172	0.12552	0.12930	0.13307	0.13683	0.14058
0.4	0.15542	0.15910	0.16276	0.16640	0.17003	0.17364	0.17724
0.5	0.19146	0.19497	0.19847	0.20194	0.20540	0.20884	0.21226
0.6	0.22575	0.22907	0.23237	0.23565	0.23891	0.24215	0.24537

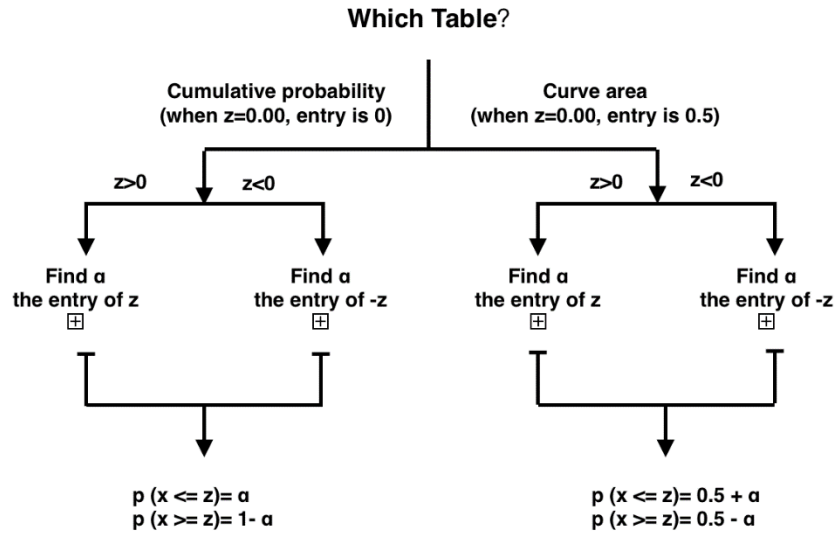
$p(0 \leq x \leq z)$
 Area between 0 and z

Each entry in the normal curve area table is the probability of a random variable (x) is between 0 and the special value z , which is illustrated in the graph as the shaded area from the 0 to value z .



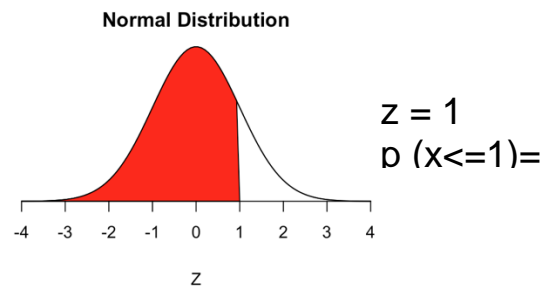
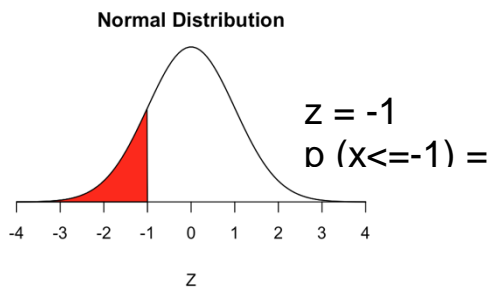
Using the Standard Normal Table

Steps



Practice

Find the probability given z-score using both tables:



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References: The following works were referred to during the creation of this handout: Arnold, B. C., Balakrishnan, N., & Nagaraja, H. N. (2008). A first course in order statistics. Society for Industrial and Applied Mathematics.



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