

Table: Cumulative Binomial probabilities

$$P[X \leq c] = \sum_{x=0}^c \binom{n}{x} p^x (1-p)^{n-x}$$

		p										
	c	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.95
n = 1	0	0.950	0.900	0.800	0.700	0.600	0.500	0.400	0.300	0.200	0.100	0.050
	1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 2	0	0.903	0.810	0.640	0.490	0.360	0.250	0.160	0.090	0.040	0.010	0.003
	1	0.998	0.990	0.960	0.910	0.840	0.750	0.640	0.510	0.360	0.190	0.098
	2	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 3	0	0.857	0.729	0.512	0.343	0.216	0.125	0.064	0.027	0.008	0.001	0.000
	1	0.993	0.972	0.896	0.784	0.648	0.500	0.352	0.216	0.104	0.028	0.007
	2	1.000	0.999	0.992	0.973	0.936	0.875	0.784	0.657	0.488	0.271	0.143
	3	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 4	0	0.815	0.656	0.410	0.240	0.130	0.063	0.026	0.008	0.002	0.000	0.000
	1	0.986	0.948	0.819	0.652	0.475	0.313	0.179	0.084	0.027	0.004	0.000
	2	1.000	0.996	0.973	0.916	0.821	0.688	0.525	0.348	0.181	0.052	0.014
	3	1.000	1.000	0.998	0.992	0.974	0.938	0.870	0.760	0.590	0.344	0.185
	4	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 5	0	0.774	0.590	0.328	0.168	0.078	0.031	0.010	0.002	0.000	0.000	0.000
	1	0.977	0.919	0.737	0.528	0.337	0.188	0.087	0.031	0.007	0.000	0.000
	2	0.999	0.991	0.942	0.837	0.683	0.500	0.317	0.163	0.058	0.009	0.001
	3	1.000	1.000	0.993	0.969	0.913	0.813	0.663	0.472	0.263	0.081	0.023
	4	1.000	1.000	1.000	0.998	0.990	0.969	0.922	0.832	0.672	0.410	0.226
	5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 6	0	0.735	0.531	0.262	0.118	0.047	0.016	0.004	0.001	0.000	0.000	0.000
	1	0.967	0.886	0.655	0.420	0.233	0.109	0.041	0.011	0.002	0.000	0.000
	2	0.998	0.984	0.901	0.744	0.544	0.344	0.179	0.070	0.017	0.001	0.000
	3	1.000	0.999	0.983	0.930	0.821	0.656	0.456	0.256	0.099	0.016	0.002
	4	1.000	1.000	0.998	0.989	0.959	0.891	0.767	0.580	0.345	0.114	0.033
	5	1.000	1.000	1.000	0.999	0.996	0.984	0.953	0.882	0.738	0.469	0.265
	6	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 7	0	0.698	0.478	0.210	0.082	0.028	0.008	0.002	0.000	0.000	0.000	0.000
	1	0.956	0.850	0.577	0.329	0.159	0.063	0.019	0.004	0.000	0.000	0.000
	2	0.996	0.974	0.852	0.647	0.420	0.227	0.096	0.029	0.005	0.000	0.000
	3	1.000	0.997	0.967	0.874	0.710	0.500	0.290	0.126	0.033	0.003	0.000
	4	1.000	1.000	0.995	0.971	0.904	0.773	0.580	0.353	0.148	0.026	0.004
	5	1.000	1.000	1.000	0.996	0.981	0.938	0.841	0.671	0.423	0.150	0.044
	6	1.000	1.000	1.000	1.000	0.998	0.992	0.972	0.918	0.790	0.522	0.302
	7	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table: Cumulative Binomial probabilities (*continued*)

		p										
	c	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.95
n = 8	0	0.663	0.430	0.168	0.058	0.017	0.004	0.001	0.000	0.000	0.000	0.000
	1	0.943	0.813	0.503	0.255	0.106	0.035	0.009	0.001	0.000	0.000	0.000
	2	0.994	0.962	0.797	0.552	0.315	0.145	0.050	0.011	0.001	0.000	0.000
	3	1.000	0.995	0.944	0.806	0.594	0.363	0.174	0.058	0.010	0.000	0.000
	4	1.000	1.000	0.990	0.942	0.826	0.637	0.406	0.194	0.056	0.005	0.000
	5	1.000	1.000	0.999	0.989	0.950	0.855	0.685	0.448	0.203	0.038	0.006
	6	1.000	1.000	1.000	0.999	0.991	0.965	0.894	0.745	0.497	0.187	0.057
	7	1.000	1.000	1.000	1.000	0.999	0.996	0.983	0.942	0.832	0.570	0.337
	8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 9	0	0.630	0.387	0.134	0.040	0.010	0.002	0.000	0.000	0.000	0.000	0.000
	1	0.929	0.775	0.436	0.196	0.071	0.020	0.004	0.000	0.000	0.000	0.000
	2	0.992	0.947	0.738	0.463	0.232	0.090	0.025	0.004	0.000	0.000	0.000
	3	0.999	0.992	0.914	0.730	0.483	0.254	0.099	0.025	0.003	0.000	0.000
	4	1.000	0.999	0.980	0.901	0.733	0.500	0.267	0.099	0.020	0.001	0.000
	5	1.000	1.000	0.997	0.975	0.901	0.746	0.517	0.270	0.086	0.008	0.001
	6	1.000	1.000	1.000	0.996	0.975	0.910	0.768	0.537	0.262	0.053	0.008
	7	1.000	1.000	1.000	1.000	0.996	0.980	0.929	0.804	0.564	0.225	0.071
	8	1.000	1.000	1.000	1.000	1.000	0.998	0.990	0.960	0.866	0.613	0.370
	9	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 10	0	0.599	0.349	0.107	0.028	0.006	0.001	0.000	0.000	0.000	0.000	0.000
	1	0.914	0.736	0.376	0.149	0.046	0.011	0.002	0.000	0.000	0.000	0.000
	2	0.988	0.930	0.678	0.383	0.167	0.055	0.012	0.002	0.000	0.000	0.000
	3	0.999	0.987	0.879	0.650	0.382	0.172	0.055	0.011	0.001	0.000	0.000
	4	1.000	0.998	0.967	0.850	0.633	0.377	0.166	0.047	0.006	0.000	0.000
	5	1.000	1.000	0.994	0.953	0.834	0.623	0.367	0.150	0.033	0.002	0.000
	6	1.000	1.000	0.999	0.989	0.945	0.828	0.618	0.350	0.121	0.013	0.001
	7	1.000	1.000	1.000	0.998	0.988	0.945	0.833	0.617	0.322	0.070	0.012
	8	1.000	1.000	1.000	1.000	0.998	0.989	0.954	0.851	0.624	0.264	0.086
	9	1.000	1.000	1.000	1.000	1.000	0.999	0.994	0.972	0.893	0.651	0.401
	10	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 11	0	0.569	0.314	0.086	0.020	0.004	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.898	0.697	0.322	0.113	0.030	0.006	0.001	0.000	0.000	0.000	0.000
	2	0.985	0.910	0.617	0.313	0.119	0.033	0.006	0.001	0.000	0.000	0.000
	3	0.998	0.981	0.839	0.570	0.296	0.113	0.029	0.004	0.000	0.000	0.000
	4	1.000	0.997	0.950	0.790	0.533	0.274	0.099	0.022	0.002	0.000	0.000
	5	1.000	1.000	0.988	0.922	0.753	0.500	0.247	0.078	0.012	0.000	0.000
	6	1.000	1.000	0.998	0.978	0.901	0.726	0.467	0.210	0.050	0.003	0.000
	7	1.000	1.000	1.000	0.996	0.971	0.887	0.704	0.430	0.161	0.019	0.002
	8	1.000	1.000	1.000	0.999	0.994	0.967	0.881	0.687	0.383	0.090	0.015
	9	1.000	1.000	1.000	1.000	0.999	0.994	0.970	0.887	0.678	0.303	0.102
	10	1.000	1.000	1.000	1.000	1.000	1.000	0.996	0.980	0.914	0.686	0.431
	11	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table: Cumulative Binomial probabilities (*continued*)

		p										
	c	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.95
n = 12	0	0.540	0.282	0.069	0.014	0.002	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.882	0.659	0.275	0.085	0.020	0.003	0.000	0.000	0.000	0.000	0.000
	2	0.980	0.889	0.558	0.253	0.083	0.019	0.003	0.000	0.000	0.000	0.000
	3	0.998	0.974	0.795	0.493	0.225	0.073	0.015	0.002	0.000	0.000	0.000
	4	1.000	0.996	0.927	0.724	0.438	0.194	0.057	0.009	0.001	0.000	0.000
	5	1.000	0.999	0.981	0.882	0.665	0.387	0.158	0.039	0.004	0.000	0.000
	6	1.000	1.000	0.996	0.961	0.842	0.613	0.335	0.118	0.019	0.001	0.000
	7	1.000	1.000	0.999	0.991	0.943	0.806	0.562	0.276	0.073	0.004	0.000
	8	1.000	1.000	1.000	0.998	0.985	0.927	0.775	0.507	0.205	0.026	0.002
	9	1.000	1.000	1.000	1.000	0.997	0.981	0.917	0.747	0.442	0.111	0.020
	10	1.000	1.000	1.000	1.000	1.000	0.997	0.980	0.915	0.725	0.341	0.118
	11	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.986	0.931	0.718	0.460
12	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
n = 13	0	0.513	0.254	0.055	0.010	0.001	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.865	0.621	0.234	0.064	0.013	0.002	0.000	0.000	0.000	0.000	0.000
	2	0.975	0.866	0.502	0.202	0.058	0.011	0.001	0.000	0.000	0.000	0.000
	3	0.997	0.966	0.747	0.421	0.169	0.046	0.008	0.001	0.000	0.000	0.000
	4	1.000	0.994	0.901	0.654	0.353	0.133	0.032	0.004	0.000	0.000	0.000
	5	1.000	0.999	0.970	0.835	0.574	0.291	0.098	0.018	0.001	0.000	0.000
	6	1.000	1.000	0.993	0.938	0.771	0.500	0.229	0.062	0.007	0.000	0.000
	7	1.000	1.000	0.999	0.982	0.902	0.709	0.426	0.165	0.030	0.001	0.000
	8	1.000	1.000	1.000	0.996	0.968	0.867	0.647	0.346	0.099	0.006	0.000
	9	1.000	1.000	1.000	0.999	0.992	0.954	0.831	0.579	0.253	0.034	0.003
	10	1.000	1.000	1.000	1.000	0.999	0.989	0.942	0.798	0.498	0.134	0.025
	11	1.000	1.000	1.000	1.000	1.000	0.998	0.987	0.936	0.766	0.379	0.135
	12	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.990	0.945	0.746	0.487
	13	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 14	0	0.488	0.229	0.044	0.007	0.001	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.847	0.585	0.198	0.047	0.008	0.001	0.000	0.000	0.000	0.000	0.000
	2	0.970	0.842	0.448	0.161	0.040	0.006	0.001	0.000	0.000	0.000	0.000
	3	0.996	0.956	0.698	0.355	0.124	0.029	0.004	0.000	0.000	0.000	0.000
	4	1.000	0.991	0.870	0.584	0.279	0.090	0.018	0.002	0.000	0.000	0.000
	5	1.000	0.999	0.956	0.781	0.486	0.212	0.058	0.008	0.000	0.000	0.000
	6	1.000	1.000	0.988	0.907	0.692	0.395	0.150	0.031	0.002	0.000	0.000
	7	1.000	1.000	0.998	0.969	0.850	0.605	0.308	0.093	0.012	0.000	0.000
	8	1.000	1.000	1.000	0.992	0.942	0.788	0.514	0.219	0.044	0.001	0.000
	9	1.000	1.000	1.000	0.998	0.982	0.910	0.721	0.416	0.130	0.009	0.000
	10	1.000	1.000	1.000	1.000	0.996	0.971	0.876	0.645	0.302	0.044	0.004
	11	1.000	1.000	1.000	1.000	0.999	0.994	0.960	0.839	0.552	0.158	0.030
	12	1.000	1.000	1.000	1.000	1.000	0.999	0.992	0.953	0.802	0.415	0.153
	13	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.993	0.956	0.771	0.512
	14	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table: Cumulative Binomial probabilities (*continued*)

		p										
c		0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.95
n = 15	0	0.463	0.206	0.035	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.829	0.549	0.167	0.035	0.005	0.000	0.000	0.000	0.000	0.000	0.000
	2	0.964	0.816	0.398	0.127	0.027	0.004	0.000	0.000	0.000	0.000	0.000
	3	0.995	0.944	0.648	0.297	0.091	0.018	0.002	0.000	0.000	0.000	0.000
	4	0.999	0.987	0.836	0.515	0.217	0.059	0.009	0.001	0.000	0.000	0.000
	5	1.000	0.998	0.939	0.722	0.403	0.151	0.034	0.004	0.000	0.000	0.000
	6	1.000	1.000	0.982	0.869	0.610	0.304	0.095	0.015	0.001	0.000	0.000
	7	1.000	1.000	0.996	0.950	0.787	0.500	0.213	0.050	0.004	0.000	0.000
	8	1.000	1.000	0.999	0.985	0.905	0.696	0.390	0.131	0.018	0.000	0.000
	9	1.000	1.000	1.000	0.996	0.966	0.849	0.597	0.278	0.061	0.002	0.000
	10	1.000	1.000	1.000	0.999	0.991	0.941	0.783	0.485	0.164	0.013	0.001
	11	1.000	1.000	1.000	1.000	0.998	0.982	0.909	0.703	0.352	0.056	0.005
	12	1.000	1.000	1.000	1.000	1.000	0.996	0.973	0.873	0.602	0.184	0.036
	13	1.000	1.000	1.000	1.000	1.000	1.000	0.995	0.965	0.833	0.451	0.171
	14	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.995	0.965	0.794	0.537
	15	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 16	0	0.440	0.185	0.028	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.811	0.515	0.141	0.026	0.003	0.000	0.000	0.000	0.000	0.000	0.000
	2	0.957	0.789	0.352	0.099	0.018	0.002	0.000	0.000	0.000	0.000	0.000
	3	0.993	0.932	0.598	0.246	0.065	0.011	0.001	0.000	0.000	0.000	0.000
	4	0.999	0.983	0.798	0.450	0.167	0.038	0.005	0.000	0.000	0.000	0.000
	5	1.000	0.997	0.918	0.660	0.329	0.105	0.019	0.002	0.000	0.000	0.000
	6	1.000	0.999	0.973	0.825	0.527	0.227	0.058	0.007	0.000	0.000	0.000
	7	1.000	1.000	0.993	0.926	0.716	0.402	0.142	0.026	0.001	0.000	0.000
	8	1.000	1.000	0.999	0.974	0.858	0.598	0.284	0.074	0.007	0.000	0.000
	9	1.000	1.000	1.000	0.993	0.942	0.773	0.473	0.175	0.027	0.001	0.000
	10	1.000	1.000	1.000	0.998	0.981	0.895	0.671	0.340	0.082	0.003	0.000
	11	1.000	1.000	1.000	1.000	0.995	0.962	0.833	0.550	0.202	0.017	0.001
	12	1.000	1.000	1.000	1.000	0.999	0.989	0.935	0.754	0.402	0.068	0.007
	13	1.000	1.000	1.000	1.000	1.000	0.998	0.982	0.901	0.648	0.211	0.043
	14	1.000	1.000	1.000	1.000	1.000	1.000	0.997	0.974	0.859	0.485	0.189
	15	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.997	0.972	0.815	0.560
	16	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table: Cumulative Binomial probabilities (*continued*)

		p										
	c	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.95
n = 17	0	0.418	0.167	0.023	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.792	0.482	0.118	0.019	0.002	0.000	0.000	0.000	0.000	0.000	0.000
	2	0.950	0.762	0.310	0.077	0.012	0.001	0.000	0.000	0.000	0.000	0.000
	3	0.991	0.917	0.549	0.202	0.046	0.006	0.000	0.000	0.000	0.000	0.000
	4	0.999	0.978	0.758	0.389	0.126	0.025	0.003	0.000	0.000	0.000	0.000
	5	1.000	0.995	0.894	0.597	0.264	0.072	0.011	0.001	0.000	0.000	0.000
	6	1.000	0.999	0.962	0.775	0.448	0.166	0.035	0.003	0.000	0.000	0.000
	7	1.000	1.000	0.989	0.895	0.641	0.315	0.092	0.013	0.000	0.000	0.000
	8	1.000	1.000	0.997	0.960	0.801	0.500	0.199	0.040	0.003	0.000	0.000
	9	1.000	1.000	1.000	0.987	0.908	0.685	0.359	0.105	0.011	0.000	0.000
	10	1.000	1.000	1.000	0.997	0.965	0.834	0.552	0.225	0.038	0.001	0.000
	11	1.000	1.000	1.000	0.999	0.989	0.928	0.736	0.403	0.106	0.005	0.000
	12	1.000	1.000	1.000	1.000	0.997	0.975	0.874	0.611	0.242	0.022	0.001
	13	1.000	1.000	1.000	1.000	1.000	0.994	0.954	0.798	0.451	0.083	0.009
	14	1.000	1.000	1.000	1.000	1.000	0.999	0.988	0.923	0.690	0.238	0.050
	15	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.981	0.882	0.518	0.208
	16	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.977	0.833	0.582
17	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
n = 18	0	0.397	0.150	0.018	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.774	0.450	0.099	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000
	2	0.942	0.734	0.271	0.060	0.008	0.001	0.000	0.000	0.000	0.000	0.000
	3	0.989	0.902	0.501	0.165	0.033	0.004	0.000	0.000	0.000	0.000	0.000
	4	0.998	0.972	0.716	0.333	0.094	0.015	0.001	0.000	0.000	0.000	0.000
	5	1.000	0.994	0.867	0.534	0.209	0.048	0.006	0.000	0.000	0.000	0.000
	6	1.000	0.999	0.949	0.722	0.374	0.119	0.020	0.001	0.000	0.000	0.000
	7	1.000	1.000	0.984	0.859	0.563	0.240	0.058	0.006	0.000	0.000	0.000
	8	1.000	1.000	0.996	0.940	0.737	0.407	0.135	0.021	0.001	0.000	0.000
	9	1.000	1.000	0.999	0.979	0.865	0.593	0.263	0.060	0.004	0.000	0.000
	10	1.000	1.000	1.000	0.994	0.942	0.760	0.437	0.141	0.016	0.000	0.000
	11	1.000	1.000	1.000	0.999	0.980	0.881	0.626	0.278	0.051	0.001	0.000
	12	1.000	1.000	1.000	1.000	0.994	0.952	0.791	0.466	0.133	0.006	0.000
	13	1.000	1.000	1.000	1.000	0.999	0.985	0.906	0.667	0.284	0.028	0.002
	14	1.000	1.000	1.000	1.000	1.000	0.996	0.967	0.835	0.499	0.098	0.011
	15	1.000	1.000	1.000	1.000	1.000	0.999	0.992	0.940	0.729	0.266	0.058
	16	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.986	0.901	0.550	0.226
	17	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.982	0.850	0.603
18	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	

Table: Cumulative Binomial probabilities (*continued*)

		P										
	c	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.95
n = 19	0	0.377	0.135	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.755	0.420	0.083	0.010	0.001	0.000	0.000	0.000	0.000	0.000	0.000
	2	0.933	0.705	0.237	0.046	0.005	0.000	0.000	0.000	0.000	0.000	0.000
	3	0.987	0.885	0.455	0.133	0.023	0.002	0.000	0.000	0.000	0.000	0.000
	4	0.998	0.965	0.673	0.282	0.070	0.010	0.001	0.000	0.000	0.000	0.000
	5	1.000	0.991	0.837	0.474	0.163	0.032	0.003	0.000	0.000	0.000	0.000
	6	1.000	0.998	0.932	0.666	0.308	0.084	0.012	0.001	0.000	0.000	0.000
	7	1.000	1.000	0.977	0.818	0.488	0.180	0.035	0.003	0.000	0.000	0.000
	8	1.000	1.000	0.993	0.916	0.667	0.324	0.088	0.011	0.000	0.000	0.000
	9	1.000	1.000	0.998	0.967	0.814	0.500	0.186	0.033	0.002	0.000	0.000
	10	1.000	1.000	1.000	0.989	0.912	0.676	0.333	0.084	0.007	0.000	0.000
	11	1.000	1.000	1.000	0.997	0.965	0.820	0.512	0.182	0.023	0.000	0.000
	12	1.000	1.000	1.000	0.999	0.988	0.916	0.692	0.334	0.068	0.002	0.000
	13	1.000	1.000	1.000	1.000	0.997	0.968	0.837	0.526	0.163	0.009	0.000
	14	1.000	1.000	1.000	1.000	0.999	0.990	0.930	0.718	0.327	0.035	0.002
	15	1.000	1.000	1.000	1.000	1.000	0.998	0.977	0.867	0.545	0.115	0.013
	16	1.000	1.000	1.000	1.000	1.000	1.000	0.995	0.954	0.763	0.295	0.067
	17	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.990	0.917	0.580	0.245
	18	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.986	0.865	0.623
	19	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
n = 20	0	0.358	0.122	0.012	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.736	0.392	0.069	0.008	0.001	0.000	0.000	0.000	0.000	0.000	0.000
	2	0.925	0.677	0.206	0.035	0.004	0.000	0.000	0.000	0.000	0.000	0.000
	3	0.984	0.867	0.411	0.107	0.016	0.001	0.000	0.000	0.000	0.000	0.000
	4	0.997	0.957	0.630	0.238	0.051	0.006	0.000	0.000	0.000	0.000	0.000
	5	1.000	0.989	0.804	0.416	0.126	0.021	0.002	0.000	0.000	0.000	0.000
	6	1.000	0.998	0.913	0.608	0.250	0.058	0.006	0.000	0.000	0.000	0.000
	7	1.000	1.000	0.968	0.772	0.416	0.132	0.021	0.001	0.000	0.000	0.000
	8	1.000	1.000	0.990	0.887	0.596	0.252	0.057	0.005	0.000	0.000	0.000
	9	1.000	1.000	0.997	0.952	0.755	0.412	0.128	0.017	0.001	0.000	0.000
	10	1.000	1.000	0.999	0.983	0.872	0.588	0.245	0.048	0.003	0.000	0.000
	11	1.000	1.000	1.000	0.995	0.943	0.748	0.404	0.113	0.010	0.000	0.000
	12	1.000	1.000	1.000	0.999	0.979	0.868	0.584	0.228	0.032	0.000	0.000
	13	1.000	1.000	1.000	1.000	0.994	0.942	0.750	0.392	0.087	0.002	0.000
	14	1.000	1.000	1.000	1.000	0.998	0.979	0.874	0.584	0.196	0.011	0.000
	15	1.000	1.000	1.000	1.000	1.000	0.994	0.949	0.762	0.370	0.043	0.003
	16	1.000	1.000	1.000	1.000	1.000	0.999	0.984	0.893	0.589	0.133	0.016
	17	1.000	1.000	1.000	1.000	1.000	1.000	0.996	0.965	0.794	0.323	0.075
	18	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.992	0.931	0.608	0.264
	19	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.988	0.878	0.642
	20	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table: Cumulative Binomial probabilities (*continued*)

		p										
c		0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.95
n = 25	0	0.277	0.072	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.642	0.271	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	2	0.873	0.537	0.098	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	3	0.966	0.764	0.234	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000
	4	0.993	0.902	0.421	0.090	0.009	0.000	0.000	0.000	0.000	0.000	0.000
	5	0.999	0.967	0.617	0.193	0.029	0.002	0.000	0.000	0.000	0.000	0.000
	6	1.000	0.991	0.780	0.341	0.074	0.007	0.000	0.000	0.000	0.000	0.000
	7	1.000	0.998	0.891	0.512	0.154	0.022	0.001	0.000	0.000	0.000	0.000
	8	1.000	1.000	0.953	0.677	0.274	0.054	0.004	0.000	0.000	0.000	0.000
	9	1.000	1.000	0.983	0.811	0.425	0.115	0.013	0.000	0.000	0.000	0.000
	10	1.000	1.000	0.994	0.902	0.586	0.212	0.034	0.002	0.000	0.000	0.000
	11	1.000	1.000	0.998	0.956	0.732	0.345	0.078	0.006	0.000	0.000	0.000
	12	1.000	1.000	1.000	0.983	0.846	0.500	0.154	0.017	0.000	0.000	0.000
	13	1.000	1.000	1.000	0.994	0.922	0.655	0.268	0.044	0.002	0.000	0.000
	14	1.000	1.000	1.000	0.998	0.966	0.788	0.414	0.098	0.006	0.000	0.000
	15	1.000	1.000	1.000	1.000	0.987	0.885	0.575	0.189	0.017	0.000	0.000
	16	1.000	1.000	1.000	1.000	0.996	0.946	0.726	0.323	0.047	0.000	0.000
	17	1.000	1.000	1.000	1.000	0.999	0.978	0.846	0.488	0.109	0.002	0.000
	18	1.000	1.000	1.000	1.000	1.000	0.993	0.926	0.659	0.220	0.009	0.000
	19	1.000	1.000	1.000	1.000	1.000	0.998	0.971	0.807	0.383	0.033	0.001
	20	1.000	1.000	1.000	1.000	1.000	1.000	0.991	0.910	0.579	0.098	0.007
	21	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.967	0.766	0.236	0.034
	22	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.991	0.902	0.463	0.127
	23	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.973	0.729	0.358
	24	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.996	0.928	0.723
	25	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Poisson distribution

Cumulative distribution function

This section tabulates the cumulative distribution function (c.d.f.) of the Poisson distribution with expected value (“rate”) λ , which is

$$F(x) = \mathbb{P}\{X \leq x\} = \sum_{k=0}^x \mathbb{P}\{X = k\} = \sum_{k=0}^x \exp(-\lambda) \frac{\lambda^k}{k!}.$$

x	λ												
	0.02	0.04	0.06	0.08	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
0	0.9802	0.9608	0.9418	0.9231	0.9048	0.8607	0.8187	0.7788	0.7408	0.7047	0.6703	0.6376	0.6065
1	0.9998	0.9992	0.9983	0.9970	0.9953	0.9898	0.9825	0.9735	0.9631	0.9513	0.9384	0.9246	0.9098
2	1.0000	1.0000	1.0000	0.9999	0.9998	0.9995	0.9989	0.9978	0.9964	0.9945	0.9921	0.9891	0.9856
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9997	0.9995	0.9992	0.9988	0.9982
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

x	λ												
	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1	1.1	1.2	1.3
0	0.5769	0.5488	0.5220	0.4966	0.4724	0.4493	0.4274	0.4066	0.3867	0.3679	0.3329	0.3012	0.2725
1	0.8943	0.8781	0.8614	0.8442	0.8266	0.8088	0.7907	0.7725	0.7541	0.7358	0.6990	0.6626	0.6268
2	0.9815	0.9769	0.9717	0.9659	0.9595	0.9526	0.9451	0.9371	0.9287	0.9197	0.9004	0.8795	0.8571
3	0.9975	0.9966	0.9956	0.9942	0.9927	0.9909	0.9889	0.9865	0.9839	0.9810	0.9743	0.9662	0.9569
4	0.9997	0.9996	0.9994	0.9992	0.9989	0.9986	0.9982	0.9977	0.9971	0.9963	0.9946	0.9923	0.9893
5	1.0000	1.0000	0.9999	0.9999	0.9999	0.9998	0.9997	0.9997	0.9995	0.9994	0.9990	0.9985	0.9978
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9997	0.9996
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

x	λ												
	1.4	1.5	1.6	1.7	1.8	1.9	2	2.2	2.4	2.6	2.8	3	3.2
0	0.2466	0.2231	0.2019	0.1827	0.1653	0.1496	0.1353	0.1108	0.0907	0.0743	0.0608	0.0498	0.0408
1	0.5918	0.5578	0.5249	0.4932	0.4628	0.4337	0.4060	0.3546	0.3084	0.2674	0.2311	0.1991	0.1712
2	0.8335	0.8088	0.7834	0.7572	0.7306	0.7037	0.6767	0.6227	0.5697	0.5184	0.4695	0.4232	0.3799
3	0.9463	0.9344	0.9212	0.9068	0.8913	0.8747	0.8571	0.8194	0.7787	0.7360	0.6919	0.6472	0.6025
4	0.9857	0.9814	0.9763	0.9704	0.9636	0.9559	0.9473	0.9275	0.9041	0.8774	0.8477	0.8153	0.7806
5	0.9968	0.9955	0.9940	0.9920	0.9896	0.9868	0.9834	0.9751	0.9643	0.9510	0.9349	0.9161	0.8946
6	0.9994	0.9991	0.9987	0.9981	0.9974	0.9966	0.9955	0.9925	0.9884	0.9828	0.9756	0.9665	0.9554
7	0.9999	0.9998	0.9997	0.9996	0.9994	0.9992	0.9989	0.9980	0.9967	0.9947	0.9919	0.9881	0.9832
8	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9998	0.9995	0.9991	0.9985	0.9976	0.9962	0.9943
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	0.9993	0.9989	0.9982
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9997	0.9995
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

x	λ												
	3.4	3.6	3.8	4	4.2	4.4	4.6	4.8	5	5.2	5.4	5.6	5.8
0	0.0334	0.0273	0.0224	0.0183	0.0150	0.0123	0.0101	0.0082	0.0067	0.0055	0.0045	0.0037	0.0030
1	0.1468	0.1257	0.1074	0.0916	0.0780	0.0663	0.0563	0.0477	0.0404	0.0342	0.0289	0.0244	0.0206
2	0.3397	0.3027	0.2689	0.2381	0.2102	0.1851	0.1626	0.1425	0.1247	0.1088	0.0948	0.0824	0.0715
3	0.5584	0.5152	0.4735	0.4335	0.3954	0.3594	0.3257	0.2942	0.2650	0.2381	0.2133	0.1906	0.1700
4	0.7442	0.7064	0.6678	0.6288	0.5898	0.5512	0.5132	0.4763	0.4405	0.4061	0.3733	0.3422	0.3127
5	0.8705	0.8441	0.8156	0.7851	0.7531	0.7199	0.6858	0.6510	0.6160	0.5809	0.5461	0.5119	0.4783
6	0.9421	0.9267	0.9091	0.8893	0.8675	0.8436	0.8180	0.7908	0.7622	0.7324	0.7017	0.6703	0.6384
7	0.9769	0.9692	0.9599	0.9489	0.9361	0.9214	0.9049	0.8867	0.8666	0.8449	0.8217	0.7970	0.7710

→

x	3.4	3.6	3.8	4	4.2	4.4	4.6	4.8	5	5.2	5.4	5.6	5.8
8	0.9917	0.9883	0.9840	0.9786	0.9721	0.9642	0.9549	0.9442	0.9319	0.9181	0.9027	0.8857	0.8672
9	0.9973	0.9960	0.9942	0.9919	0.9889	0.9851	0.9805	0.9749	0.9682	0.9603	0.9512	0.9409	0.9292
10	0.9992	0.9987	0.9981	0.9972	0.9959	0.9943	0.9922	0.9896	0.9863	0.9823	0.9775	0.9718	0.9651
11	0.9998	0.9996	0.9994	0.9991	0.9986	0.9980	0.9971	0.9960	0.9945	0.9927	0.9904	0.9875	0.9841
12	0.9999	0.9999	0.9998	0.9997	0.9996	0.9993	0.9990	0.9986	0.9980	0.9972	0.9962	0.9949	0.9932
13	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9997	0.9995	0.9993	0.9990	0.9986	0.9980	0.9973
14	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9998	0.9997	0.9995	0.9993	0.9990
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9998	0.9996
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

x	λ												
	6	6.2	6.4	6.6	6.8	7	7.2	7.4	7.6	7.8	8	8.5	9
0	0.0025	0.0020	0.0017	0.0014	0.0011	0.0009	0.0007	0.0006	0.0005	0.0004	0.0003	0.0002	0.0001
1	0.0174	0.0146	0.0123	0.0103	0.0087	0.0073	0.0061	0.0051	0.0043	0.0036	0.0030	0.0019	0.0012
2	0.0620	0.0536	0.0463	0.0400	0.0344	0.0296	0.0255	0.0219	0.0188	0.0161	0.0138	0.0093	0.0062
3	0.1512	0.1342	0.1189	0.1052	0.0928	0.0818	0.0719	0.0632	0.0554	0.0485	0.0424	0.0301	0.0212
4	0.2851	0.2592	0.2351	0.2127	0.1920	0.1730	0.1555	0.1395	0.1249	0.1117	0.0996	0.0744	0.0550
5	0.4457	0.4141	0.3837	0.3547	0.3270	0.3007	0.2759	0.2526	0.2307	0.2103	0.1912	0.1496	0.1157
6	0.6063	0.5742	0.5423	0.5108	0.4799	0.4497	0.4204	0.3920	0.3646	0.3384	0.3134	0.2562	0.2068
7	0.7440	0.7160	0.6873	0.6581	0.6285	0.5987	0.5689	0.5393	0.5100	0.4812	0.4530	0.3856	0.3239
8	0.8472	0.8259	0.8033	0.7796	0.7548	0.7291	0.7027	0.6757	0.6482	0.6204	0.5925	0.5231	0.4557
9	0.9161	0.9016	0.8858	0.8686	0.8502	0.8305	0.8096	0.7877	0.7649	0.7411	0.7166	0.6530	0.5874
10	0.9574	0.9486	0.9386	0.9274	0.9151	0.9015	0.8867	0.8707	0.8535	0.8352	0.8159	0.7634	0.7060
11	0.9799	0.9750	0.9693	0.9627	0.9552	0.9467	0.9371	0.9265	0.9148	0.9020	0.8881	0.8487	0.8030
12	0.9912	0.9887	0.9857	0.9821	0.9779	0.9730	0.9673	0.9609	0.9536	0.9454	0.9362	0.9091	0.8758
13	0.9964	0.9952	0.9937	0.9920	0.9898	0.9872	0.9841	0.9805	0.9762	0.9714	0.9658	0.9486	0.9261
14	0.9986	0.9981	0.9974	0.9966	0.9956	0.9943	0.9927	0.9908	0.9886	0.9859	0.9827	0.9726	0.9585
15	0.9995	0.9993	0.9990	0.9986	0.9982	0.9976	0.9969	0.9959	0.9948	0.9934	0.9918	0.9862	0.9780
16	0.9998	0.9997	0.9996	0.9995	0.9993	0.9990	0.9987	0.9983	0.9978	0.9971	0.9963	0.9934	0.9889
17	0.9999	0.9999	0.9999	0.9998	0.9997	0.9996	0.9995	0.9993	0.9991	0.9988	0.9984	0.9970	0.9947
18	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9998	0.9997	0.9996	0.9995	0.9993	0.9987	0.9976
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9998	0.9997	0.9995	0.9989
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9996
21	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998
22	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999
23	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

x	λ												
	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5
0	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0008	0.0005	0.0003	0.0002	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0042	0.0028	0.0018	0.0012	0.0008	0.0005	0.0003	0.0002	0.0001	0.0001	0.0001	0.0000	0.0000
3	0.0149	0.0103	0.0071	0.0049	0.0034	0.0023	0.0016	0.0011	0.0007	0.0005	0.0003	0.0002	0.0001
4	0.0403	0.0293	0.0211	0.0151	0.0107	0.0076	0.0053	0.0037	0.0026	0.0018	0.0012	0.0009	0.0006
5	0.0885	0.0671	0.0504	0.0375	0.0277	0.0203	0.0148	0.0107	0.0077	0.0055	0.0039	0.0028	0.0020
6	0.1649	0.1301	0.1016	0.0786	0.0603	0.0458	0.0346	0.0259	0.0193	0.0142	0.0105	0.0076	0.0055
7	0.2687	0.2202	0.1785	0.1432	0.1137	0.0895	0.0698	0.0540	0.0415	0.0316	0.0239	0.0180	0.0135
8	0.3918	0.3328	0.2794	0.2320	0.1906	0.1550	0.1249	0.0998	0.0790	0.0621	0.0484	0.0374	0.0288
9	0.5218	0.4579	0.3971	0.3405	0.2888	0.2424	0.2014	0.1658	0.1353	0.1094	0.0878	0.0699	0.0552
10	0.6453	0.5830	0.5207	0.4599	0.4017	0.3472	0.2971	0.2517	0.2112	0.1757	0.1449	0.1185	0.0961
11	0.7520	0.6968	0.6387	0.5793	0.5198	0.4616	0.4058	0.3532	0.3045	0.2600	0.2201	0.1848	0.1538
12	0.8364	0.7916	0.7420	0.6887	0.6329	0.5760	0.5190	0.4631	0.4093	0.3585	0.3111	0.2676	0.2283
13	0.8981	0.8645	0.8253	0.7813	0.7330	0.6815	0.6278	0.5730	0.5182	0.4644	0.4125	0.3632	0.3171
14	0.9400	0.9165	0.8879	0.8540	0.8153	0.7720	0.7250	0.6751	0.6233	0.5704	0.5176	0.4657	0.4154
15	0.9665	0.9513	0.9317	0.9074	0.8783	0.8444	0.8060	0.7636	0.7178	0.6694	0.6192	0.5681	0.5170
16	0.9823	0.9730	0.9604	0.9441	0.9236	0.8987	0.8693	0.8355	0.7975	0.7559	0.7112	0.6641	0.6154
17	0.9911	0.9857	0.9781	0.9678	0.9542	0.9370	0.9158	0.8905	0.8609	0.8272	0.7897	0.7489	0.7052
18	0.9957	0.9928	0.9885	0.9823	0.9738	0.9626	0.9481	0.9302	0.9084	0.8826	0.8530	0.8195	0.7825

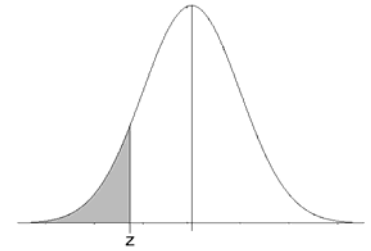
→

x	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5
19	0.9980	0.9965	0.9942	0.9907	0.9857	0.9787	0.9694	0.9573	0.9421	0.9235	0.9012	0.8752	0.8455
20	0.9991	0.9984	0.9972	0.9953	0.9925	0.9884	0.9827	0.9750	0.9649	0.9521	0.9362	0.9170	0.8944
21	0.9996	0.9993	0.9987	0.9977	0.9962	0.9939	0.9906	0.9859	0.9796	0.9712	0.9604	0.9469	0.9304
22	0.9999	0.9997	0.9994	0.9990	0.9982	0.9970	0.9951	0.9924	0.9885	0.9833	0.9763	0.9673	0.9558
23	0.9999	0.9999	0.9998	0.9995	0.9992	0.9985	0.9975	0.9960	0.9938	0.9907	0.9863	0.9805	0.9730
24	1.0000	1.0000	0.9999	0.9998	0.9996	0.9993	0.9988	0.9980	0.9968	0.9950	0.9924	0.9888	0.9840
25	1.0000	1.0000	1.0000	0.9999	0.9998	0.9997	0.9994	0.9990	0.9984	0.9974	0.9959	0.9938	0.9909
26	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9997	0.9995	0.9992	0.9987	0.9979	0.9967	0.9950
27	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9996	0.9994	0.9989	0.9983	0.9973
28	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9997	0.9995	0.9991	0.9986
29	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9996	0.9993
30	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9997
31	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998
32	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999
33	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

x	λ												
	16	17	18	19	20	21	22	23	24	25	30	35	40
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0004	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0014	0.0007	0.0003	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0040	0.0021	0.0010	0.0005	0.0003	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0100	0.0054	0.0029	0.0015	0.0008	0.0004	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0220	0.0126	0.0071	0.0039	0.0021	0.0011	0.0006	0.0003	0.0002	0.0001	0.0000	0.0000	0.0000
9	0.0433	0.0261	0.0154	0.0089	0.0050	0.0028	0.0015	0.0008	0.0004	0.0002	0.0000	0.0000	0.0000
10	0.0774	0.0491	0.0304	0.0183	0.0108	0.0063	0.0035	0.0020	0.0011	0.0006	0.0000	0.0000	0.0000
11	0.1270	0.0847	0.0549	0.0347	0.0214	0.0129	0.0076	0.0044	0.0025	0.0014	0.0001	0.0000	0.0000
12	0.1931	0.1350	0.0917	0.0606	0.0390	0.0245	0.0151	0.0091	0.0054	0.0031	0.0002	0.0000	0.0000
13	0.2745	0.2009	0.1426	0.0984	0.0661	0.0434	0.0278	0.0174	0.0107	0.0065	0.0004	0.0000	0.0000
14	0.3675	0.2808	0.2081	0.1497	0.1049	0.0716	0.0477	0.0311	0.0198	0.0124	0.0009	0.0000	0.0000
15	0.4667	0.3715	0.2867	0.2148	0.1565	0.1111	0.0769	0.0520	0.0344	0.0223	0.0019	0.0001	0.0000
16	0.5660	0.4677	0.3751	0.2920	0.2211	0.1629	0.1170	0.0821	0.0563	0.0377	0.0039	0.0003	0.0000
17	0.6593	0.5640	0.4686	0.3784	0.2970	0.2270	0.1690	0.1228	0.0871	0.0605	0.0073	0.0006	0.0000
18	0.7423	0.6550	0.5622	0.4695	0.3814	0.3017	0.2325	0.1748	0.1283	0.0920	0.0129	0.0012	0.0001
19	0.8122	0.7363	0.6509	0.5606	0.4703	0.3843	0.3060	0.2377	0.1803	0.1336	0.0219	0.0023	0.0002
20	0.8682	0.8055	0.7307	0.6472	0.5591	0.4710	0.3869	0.3101	0.2426	0.1855	0.0353	0.0043	0.0004
21	0.9108	0.8615	0.7991	0.7255	0.6437	0.5577	0.4716	0.3894	0.3139	0.2473	0.0544	0.0076	0.0007
22	0.9418	0.9047	0.8551	0.7931	0.7206	0.6405	0.5564	0.4723	0.3917	0.3175	0.0806	0.0128	0.0014
23	0.9633	0.9367	0.8989	0.8490	0.7875	0.7160	0.6374	0.5551	0.4728	0.3939	0.1146	0.0208	0.0026
24	0.9777	0.9594	0.9317	0.8933	0.8432	0.7822	0.7117	0.6346	0.5540	0.4734	0.1572	0.0324	0.0045
25	0.9869	0.9748	0.9554	0.9269	0.8878	0.8377	0.7771	0.7077	0.6319	0.5529	0.2084	0.0486	0.0076
26	0.9925	0.9848	0.9718	0.9514	0.9221	0.8826	0.8324	0.7723	0.7038	0.6294	0.2673	0.0705	0.0123
27	0.9959	0.9912	0.9827	0.9687	0.9475	0.9175	0.8775	0.8274	0.7677	0.7002	0.3329	0.0988	0.0193
28	0.9978	0.9950	0.9897	0.9805	0.9657	0.9436	0.9129	0.8726	0.8225	0.7634	0.4031	0.1343	0.0294
29	0.9989	0.9973	0.9941	0.9882	0.9782	0.9626	0.9398	0.9085	0.8679	0.8179	0.4757	0.1770	0.0432
30	0.9994	0.9986	0.9967	0.9930	0.9865	0.9758	0.9595	0.9360	0.9042	0.8633	0.5484	0.2269	0.0617
31	0.9997	0.9993	0.9982	0.9960	0.9919	0.9848	0.9735	0.9564	0.9322	0.8999	0.6186	0.2833	0.0855
32	0.9999	0.9996	0.9990	0.9978	0.9953	0.9907	0.9831	0.9711	0.9533	0.9285	0.6845	0.3449	0.1153
33	0.9999	0.9998	0.9995	0.9988	0.9973	0.9945	0.9895	0.9813	0.9686	0.9502	0.7444	0.4102	0.1514
34	1.0000	0.9999	0.9998	0.9994	0.9985	0.9968	0.9936	0.9882	0.9794	0.9662	0.7973	0.4775	0.1939
35	1.0000	1.0000	0.9999	0.9997	0.9992	0.9982	0.9962	0.9927	0.9868	0.9775	0.8426	0.5448	0.2424
36	1.0000	1.0000	0.9999	0.9998	0.9996	0.9990	0.9978	0.9956	0.9918	0.9854	0.8804	0.6102	0.2963
37	1.0000	1.0000	1.0000	0.9999	0.9998	0.9995	0.9988	0.9974	0.9950	0.9908	0.9110	0.6721	0.3547
38	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9993	0.9985	0.9970	0.9943	0.9352	0.7291	0.4160
39	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9996	0.9992	0.9983	0.9966	0.9537	0.7802	0.4790
40	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	0.9990	0.9980	0.9677	0.8249	0.5419
41	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9995	0.9988	0.9779	0.8631	0.6033
42	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9993	0.9852	0.8950	0.6618
43	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	0.9903	0.9209	0.7162

[illegible]

Standard Normal Cumulative Probability Table



Cumulative probabilities for NEGATIVE z-values are shown in the following table:

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-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
-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

A normal distribution curve is shown with its mean at the center. A vertical line is drawn at a point labeled z on the horizontal axis. The area under the curve to the left of z is shaded gray, representing the cumulative probability $P(Z \leq z)$.

$$Z$$

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
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