

Table 3 Cumulative Binomial Probabilities

The table shows the probability of x or fewer successes in n independent trials each with probability of success P . For example, the probability of two or less successes in four independent trials, each with probability of success, 0.35 is 0.874.

n	x	P									
		.05	.10	.15	.20	.25	.30	.35	.40	.45	.500
2	0	.902	.81	.722	.64	.562	.49	.422	.36	.302	.25
	1	.998	.99	.978	.96	.937	.91	.877	.84	.797	.75
	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3	0	.857	.729	.614	.512	.422	.343	.275	.216	.166	.125
	1	.993	.972	.939	.896	.844	.784	.718	.648	.575	.500
	2	1.00	.999	.997	.992	.984	.973	.957	.936	.909	.875
	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
4	0	.815	.656	.522	.41	.316	.24	.179	.13	.092	.062
	1	.986	.948	.89	.819	.738	.652	.563	.475	.391	.312
	2	1.00	.996	.988	.973	.949	.916	.874	.821	.759	.687
	3	1.00	1.00	.999	.998	.996	.992	.985	.974	.959	.937
	4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
5	0	.774	.59	.444	.328	.237	.168	.116	.078	.05	.031
	1	.977	.919	.835	.737	.633	.528	.428	.337	.256	.187
	2	.999	.991	.973	.942	.896	.837	.765	.683	.593	.500
	3	1.00	1.00	.998	.993	.984	.969	.946	.913	.869	.812
	4	1.00	1.00	1.00	1.00	.999	.998	.995	.99	.982	.969
	5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
6	0	.735	.531	.377	.262	.178	.118	.075	.047	.028	.016
	1	.967	.886	.776	.655	.534	.42	.319	.233	.164	.109
	2	.998	.984	.953	.901	.831	.744	.647	.544	.442	.344
	3	1.00	.999	.994	.983	.962	.93	.883	.821	.745	.656
	4	1.00	1.00	1.00	.998	.995	.989	.978	.959	.931	.891
	5	1.00	1.00	1.00	1.00	1.00	.999	.998	.996	.992	.984
	6	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
7	0	.698	.478	.321	.21	.133	.082	.049	.028	.015	.008
	1	.956	.85	.717	.577	.445	.329	.234	.159	.102	.062
	2	.996	.974	.926	.852	.756	.647	.532	.42	.316	.227
	3	1.00	.997	.988	.967	.929	.874	.80	.71	.608	.500
	4	1.00	1.00	.999	.995	.987	.971	.944	.904	.847	.773
	5	1.00	1.00	1.00	1.00	.999	.996	.991	.981	.964	.937
	6	1.00	1.00	1.00	1.00	1.00	1.00	.999	.998	.996	.992
	7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
8	0	.663	.43	.272	.168	.10	.058	.032	.017	.008	.004
	1	.943	.813	.657	.503	.367	.255	.169	.106	.063	.035
	2	.994	.962	.895	.797	.679	.552	.428	.315	.22	.145
	3	1.00	.995	.979	.944	.886	.806	.706	.594	.477	.363
	4	1.00	1.00	.997	.99	.973	.942	.894	.826	.74	.637
	5	1.00	1.00	1.00	.999	.996	.989	.975	.95	.912	.855
	6	1.00	1.00	1.00	1.00	1.00	.999	.996	.991	.982	.965
	7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.998	.996
	8	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
9	0	.63	.387	.232	.134	.075	.04	.021	.01	.005	.002
	1	.929	.775	.599	.436	.30	.196	.121	.071	.039	.020
	2	.992	.947	.859	.738	.601	.463	.337	.232	.15	.090
	3	.999	.992	.966	.914	.834	.73	.609	.483	.361	.254
	4	1.00	.999	.994	.98	.951	.901	.828	.733	.621	.500
	5	1.00	1.00	.999	.997	.99	.975	.946	.901	.834	.746
	6	1.00	1.00	1.00	1.00	.999	.996	.989	.975	.95	.910
	7	1.00	1.00	1.00	1.00	1.00	1.00	.999	.996	.991	.980
	8	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.998
	9	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000

Table 3 Cumulative Binomial Probabilities Continued

n	x	P									
		.05	.10	.15	.20	.25	.30	.35	.40	.45	.500
10	0	.599	.349	.197	.107	.056	.028	.013	.006	.003	.001
	1	.914	.736	.544	.376	.244	.149	.086	.046	.023	.011
	2	.988	.93	.82	.678	.526	.383	.262	.167	.10	.055
	3	.999	.987	.95	.879	.776	.65	.514	.382	.266	.172
	4	1.00	.998	.99	.967	.922	.85	.751	.633	.504	.377
	5	1.00	1.00	.999	.994	.98	.953	.905	.834	.738	.623
	6	1.00	1.00	1.00	.999	.996	.989	.974	.945	.898	.828
	7	1.00	1.00	1.00	1.00	1.00	.998	.995	.988	.973	.945
	8	1.00	1.00	1.00	1.00	1.00	1.00	.999	.998	.995	.989
	9	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999
	10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
11	0	.569	.314	.167	.086	.042	.02	.009	.004	.001	.000
	1	.898	.697	.492	.322	.197	.113	.061	.03	.014	.006
	2	.985	.91	.779	.617	.455	.313	.20	.119	.065	.033
	3	.998	.981	.931	.839	.713	.57	.426	.296	.191	.113
	4	1.00	.997	.984	.95	.885	.79	.668	.533	.397	.274
	5	1.00	1.00	.997	.988	.966	.922	.851	.753	.633	.500
	6	1.00	1.00	1.00	.998	.992	.978	.95	.901	.826	.726
	7	1.00	1.00	1.00	1.00	.999	.996	.988	.971	.939	.887
	8	1.00	1.00	1.00	1.00	1.00	.999	.998	.994	.985	.967
	9	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.998	.994
	10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	
12	0	.54	.282	.142	.069	.032	.014	.006	.002	.001	.000
	1	.882	.659	.443	.275	.158	.085	.042	.02	.008	.003
	2	.98	.889	.736	.558	.391	.253	.151	.083	.042	.019
	3	.998	.974	.908	.795	.649	.493	.347	.225	.134	.073
	4	1.00	.996	.976	.927	.842	.724	.583	.438	.304	.194
	5	1.00	.999	.995	.981	.946	.882	.787	.665	.527	.387
	6	1.00	1.00	.999	.996	.986	.961	.915	.842	.739	.613
	7	1.00	1.00	1.00	.999	.997	.991	.974	.943	.888	.806
	8	1.00	1.00	1.00	1.00	1.00	.998	.994	.985	.964	.927
	9	1.00	1.00	1.00	1.00	1.00	1.00	.999	.997	.992	.981
	10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.997
	11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	
13	0	.513	.254	.121	.055	.024	.01	.004	.001	.00	.000
	1	.865	.621	.398	.234	.127	.064	.03	.013	.005	.002
	2	.975	.866	.692	.502	.333	.202	.113	.058	.027	.011
	3	.997	.966	.882	.747	.584	.421	.278	.169	.093	.046
	4	1.00	.994	.966	.901	.794	.654	.501	.353	.228	.133
	5	1.00	.999	.992	.97	.92	.835	.716	.574	.427	.291
	6	1.00	1.00	.999	.993	.976	.938	.871	.771	.644	.50
	7	1.00	1.00	1.00	.999	.994	.982	.954	.902	.821	.709
	8	1.00	1.00	1.00	1.00	.999	.996	.987	.968	.93	.867
	9	1.00	1.00	1.00	1.00	1.00	.999	.997	.992	.98	.954
	10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.996	.989
	11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.998
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	
14	0	.488	.229	.103	.044	.018	.007	.002	.001	.00	.000
	1	.847	.585	.357	.198	.101	.047	.021	.008	.003	.001
	2	.97	.842	.648	.448	.281	.161	.084	.04	.017	.006
	3	.996	.956	.853	.698	.521	.355	.22	.124	.063	.029
	4	1.00	.991	.953	.87	.742	.584	.423	.279	.167	.090
	5	1.00	.999	.988	.956	.888	.781	.641	.486	.337	.212

Table 3 Cumulative Binomial Probabilities Continued

n	x	P									
		.05	.10	.15	.20	.25	.30	.35	.40	.45	.500
15	6	1.00	1.00	.998	.988	.962	.907	.816	.692	.546	.395
	7	1.00	1.00	1.00	.998	.99	.969	.925	.85	.741	.605
	8	1.00	1.00	1.00	1.00	.998	.992	.976	.942	.881	.788
	9	1.00	1.00	1.00	1.00	1.00	.998	.994	.982	.957	.910
	10	1.00	1.00	1.00	1.00	1.00	1.00	.999	.996	.989	.971
	11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.998	.994
	12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999
	13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
	0	.463	.206	.087	.035	.013	.005	.002	.00	.00	.000
	1	.829	.549	.319	.167	.08	.035	.014	.005	.002	.000
	2	.964	.816	.604	.398	.236	.127	.062	.027	.011	.004
	3	.995	.944	.823	.648	.461	.297	.173	.091	.042	.018
	4	.999	.987	.938	.836	.686	.515	.352	.217	.12	.059
5	1.00	.998	.983	.939	.852	.722	.564	.403	.261	.151	
6	1.00	1.00	.996	.982	.943	.869	.755	.61	.452	.304	
7	1.00	1.00	.999	.996	.983	.95	.887	.787	.654	.500	
8	1.00	1.00	1.00	.999	.996	.985	.958	.905	.818	.696	
9	1.00	1.00	1.00	1.00	.999	.996	.988	.966	.923	.849	
10	1.00	1.00	1.00	1.00	1.00	.999	.997	.991	.975	.941	
11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.998	.994	.982	
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.996	
13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	
16	0	.44	.185	.074	.028	.01	.003	.001	.00	.00	.000
	1	.811	.515	.284	.141	.063	.026	.01	.003	.001	.000
	2	.957	.789	.561	.352	.197	.099	.045	.018	.007	.002
	3	.993	.932	.79	.598	.405	.246	.134	.065	.028	.011
	4	.999	.983	.921	.798	.63	.45	.289	.167	.085	.038
	5	1.00	.997	.976	.918	.81	.66	.49	.329	.198	.105
	6	1.00	.999	.994	.973	.92	.825	.688	.527	.366	.227
	7	1.00	1.00	.999	.993	.973	.926	.841	.716	.563	.402
	8	1.00	1.00	1.00	.999	.993	.974	.933	.858	.744	.598
	9	1.00	1.00	1.00	1.00	.998	.993	.977	.942	.876	.773
	10	1.00	1.00	1.00	1.00	1.00	.998	.994	.981	.951	.895
	11	1.00	1.00	1.00	1.00	1.00	1.00	.999	.995	.985	.962
	12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.997	.989
	13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999	.998
14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	
17	0	.418	.167	.063	.023	.008	.002	.001	.00	.00	.000
	1	.792	.482	.252	.118	.05	.019	.007	.002	.001	.000
	2	.95	.762	.52	.31	.164	.077	.033	.012	.004	.001
	3	.991	.917	.756	.549	.353	.202	.103	.046	.018	.006
	4	.999	.978	.901	.758	.574	.389	.235	.126	.06	.025
	5	1.00	.995	.968	.894	.765	.597	.42	.264	.147	.072
	6	1.00	.999	.992	.962	.893	.775	.619	.448	.29	.166
	7	1.00	1.00	.998	.989	.96	.895	.787	.641	.474	.315
	8	1.00	1.00	1.00	.997	.988	.96	.901	.801	.663	.500
	9	1.00	1.00	1.00	1.00	.997	.987	.962	.908	.817	.685
	10	1.00	1.00	1.00	1.00	.999	.997	.988	.965	.917	.834
	11	1.00	1.00	1.00	1.00	1.00	.999	.997	.989	.97	.928
	12	1.00	1.00	1.00	1.00	1.00	1.00	.999	.997	.991	.975
	13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.998	.994
	14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.999
	15	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000
18	0	.397	.15	.054	.018	.006	.002	.00	.00	.00	.000
	1	.774	.45	.224	.099	.039	.014	.005	.001	.00	.000