

TABLE 1 Cumulative Binomial Distribution

$$F(x) = P(X \leq x) = \sum_{i=0}^x \binom{n}{i} p^i (1-p)^{n-i}$$

Example: if $p = 0.10$, $n = 5$, and $x = 2$, then $F(x) = 0.991$

		p												
n	x	.01	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95	.99
5	0	.951	.774	.590	.328	.168	.078	.031	.010	.002	.000	.000	.000	.000
	1	.999	.977	.919	.737	.528	.337	.187	.087	.031	.007	.000	.000	.000
	2	1.000	.999	.991	.942	.837	.683	.500	.317	.163	.058	.009	.001	.000
	3	1.000	1.000	1.000	.993	.969	.913	.813	.663	.472	.263	.081	.023	.001
	4	1.000	1.000	1.000	1.000	.998	.990	.969	.922	.832	.672	.410	.226	.049
6	0	.941	.735	.531	.262	.118	.047	.016	.004	.001	.000	.000	.000	.000
	1	.999	.967	.886	.655	.420	.233	.109	.041	.011	.002	.000	.000	.000
	2	1.000	.998	.984	.901	.744	.544	.344	.179	.070	.017	.001	.000	.000
	3	1.000	1.000	.999	.983	.930	.821	.656	.456	.256	.099	.016	.002	.000
	4	1.000	1.000	1.000	.998	.989	.959	.891	.767	.580	.345	.114	.033	.001
	5	1.000	1.000	1.000	1.000	.999	.996	.984	.953	.882	.738	.469	.265	.059
7	0	.932	.698	.478	.210	.082	.028	.008	.002	.000	.000	.000	.000	.000
	1	.998	.956	.850	.577	.329	.159	.063	.019	.004	.000	.000	.000	.000
	2	1.000	.996	.974	.852	.647	.420	.227	.096	.029	.005	.000	.000	.000
	3	1.000	1.000	.997	.967	.874	.710	.500	.290	.126	.033	.003	.000	.000
	4	1.000	1.000	1.000	.995	.971	.904	.773	.580	.353	.148	.026	.004	.000
	5	1.000	1.000	1.000	1.000	.996	.981	.937	.841	.671	.423	.150	.044	.002
	6	1.000	1.000	1.000	1.000	1.000	.998	.992	.972	.918	.790	.522	.302	.068
8	0	.923	.663	.430	.168	.058	.017	.004	.001	.000	.000	.000	.000	.000
	1	.997	.943	.813	.503	.255	.106	.035	.009	.001	.000	.000	.000	.000
	2	1.000	.994	.962	.797	.552	.315	.145	.050	.011	.001	.000	.000	.000
	3	1.000	1.000	.995	.944	.806	.594	.363	.174	.058	.010	.000	.000	.000
	4	1.000	1.000	1.000	.990	.942	.826	.637	.406	.194	.056	.005	.000	.000
	5	1.000	1.000	1.000	.999	.989	.950	.855	.685	.448	.203	.038	.006	.000
	6	1.000	1.000	1.000	1.000	.999	.991	.965	.894	.745	.497	.187	.057	.003
	7	1.000	1.000	1.000	1.000	1.000	.999	.996	.983	.942	.832	.570	.337	.077
9	0	.914	.630	.387	.134	.040	.010	.002	.000	.000	.000	.000	.000	.000
	1	.997	.929	.775	.436	.196	.071	.020	.004	.000	.000	.000	.000	.000
	2	1.000	.992	.947	.738	.463	.232	.090	.025	.004	.000	.000	.000	.000
	3	1.000	.999	.992	.914	.730	.483	.254	.099	.025	.003	.000	.000	.000
	4	1.000	1.000	.999	.980	.901	.733	.500	.267	.099	.020	.001	.000	.000
	5	1.000	1.000	1.000	.997	.975	.901	.746	.517	.270	.086	.008	.001	.000
	6	1.000	1.000	1.000	1.000	.996	.975	.910	.768	.537	.262	.053	.008	.000
	7	1.000	1.000	1.000	1.000	1.000	.996	.980	.929	.804	.564	.225	.071	.003
	8	1.000	1.000	1.000	1.000	1.000	1.000	.998	.990	.960	.866	.613	.370	.086
10	0	.904	.599	.349	.107	.028	.006	.001	.000	.000	.000	.000	.000	.000
	1	.996	.914	.736	.376	.149	.046	.011	.002	.000	.000	.000	.000	.000
	2	1.000	.988	.930	.678	.383	.167	.055	.012	.002	.000	.000	.000	.000
	3	1.000	.999	.987	.879	.650	.382	.172	.055	.011	.001	.000	.000	.000
	4	1.000	1.000	.998	.967	.850	.633	.377	.166	.047	.006	.000	.000	.000
	5	1.000	1.000	1.000	.994	.953	.834	.623	.367	.150	.033	.002	.000	.000
	6	1.000	1.000	1.000	.999	.989	.945	.828	.618	.350	.121	.013	.001	.000

TABLE 1 (continued) Cumulative Binomial Distribution

<i>n</i>	<i>x</i>	<i>p</i>												
		.01	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95	.99
15	7	1.000	1.000	1.000	1.000	.998	.988	.945	.833	.617	.322	.070	.012	.000
	8	1.000	1.000	1.000	1.000	1.000	.998	.989	.954	.851	.624	.264	.086	.004
	9	1.000	1.000	1.000	1.000	1.000	1.000	.999	.994	.972	.893	.651	.401	.096
	0	.860	.463	.206	.035	.005	.000	.000	.000	.000	.000	.000	.000	.000
	1	.990	.829	.549	.167	.035	.005	.000	.000	.000	.000	.000	.000	.000
	2	1.000	.964	.816	.398	.127	.027	.004	.000	.000	.000	.000	.000	.000
	3	1.000	.995	.944	.648	.297	.091	.018	.002	.000	.000	.000	.000	.000
	4	1.000	.999	.987	.836	.515	.217	.059	.009	.001	.000	.000	.000	.000
	5	1.000	1.000	.998	.939	.722	.403	.151	.034	.004	.000	.000	.000	.000
	6	1.000	1.000	1.000	.982	.869	.610	.304	.095	.015	.001	.000	.000	.000
	7	1.000	1.000	1.000	.996	.950	.787	.500	.213	.050	.004	.000	.000	.000
	8	1.000	1.000	1.000	.999	.985	.905	.696	.390	.131	.018	.000	.000	.000
	9	1.000	1.000	1.000	1.000	.996	.966	.849	.597	.278	.061	.002	.000	.000
	10	1.000	1.000	1.000	1.000	.999	.991	.941	.783	.485	.164	.013	.001	.000
	11	1.000	1.000	1.000	1.000	1.000	.998	.982	.909	.703	.352	.056	.005	.000
20	12	1.000	1.000	1.000	1.000	1.000	1.000	.996	.973	.873	.602	.184	.036	.000
	13	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.995	.965	.833	.451	.171	.010
	14	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.995	.965	.794	.537	.140
	0	.818	.358	.122	.012	.001	.000	.000	.000	.000	.000	.000	.000	.000
	1	.983	.736	.392	.069	.008	.001	.000	.000	.000	.000	.000	.000	.000
	2	.999	.925	.677	.206	.035	.004	.000	.000	.000	.000	.000	.000	.000
	3	1.000	.984	.867	.411	.107	.016	.001	.000	.000	.000	.000	.000	.000
	4	1.000	.997	.957	.630	.238	.051	.006	.000	.000	.000	.000	.000	.000
	5	1.000	1.000	.989	.804	.416	.126	.021	.002	.000	.000	.000	.000	.000
	6	1.000	1.000	.998	.913	.608	.250	.058	.006	.000	.000	.000	.000	.000
	7	1.000	1.000	1.000	.968	.772	.416	.132	.021	.001	.000	.000	.000	.000
	8	1.000	1.000	1.000	.990	.887	.596	.252	.057	.005	.000	.000	.000	.000
	9	1.000	1.000	1.000	.997	.952	.755	.412	.128	.017	.001	.000	.000	.000
	10	1.000	1.000	1.000	.999	.983	.872	.588	.245	.048	.003	.000	.000	.000
	11	1.000	1.000	1.000	1.000	.995	.943	.748	.404	.113	.010	.000	.000	.000
25	12	1.000	1.000	1.000	1.000	.999	.979	.868	.584	.228	.032	.000	.000	.000
	13	1.000	1.000	1.000	1.000	1.000	.994	.942	.750	.392	.087	.002	.000	.000
	14	1.000	1.000	1.000	1.000	1.000	.998	.979	.874	.584	.196	.011	.000	.000
	15	1.000	1.000	1.000	1.000	1.000	1.000	.994	.949	.762	.370	.043	.003	.000
	16	1.000	1.000	1.000	1.000	1.000	1.000	.999	.984	.893	.589	.133	.016	.000
	17	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.996	.965	.794	.323	.075	.001
	18	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.999	.992	.931	.608	.264	.017
	19	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.999	.988	.878	.642	.182
	0	.778	.277	.072	.004	.000	.000	.000	.000	.000	.000	.000	.000	.000
	1	.974	.642	.271	.027	.002	.000	.000	.000	.000	.000	.000	.000	.000
	2	.998	.873	.537	.098	.009	.000	.000	.000	.000	.000	.000	.000	.000
	3	1.000	.966	.764	.234	.033	.002	.000	.000	.000	.000	.000	.000	.000
	4	1.000	.993	.902	.421	.090	.009	.000	.000	.000	.000	.000	.000	.000
	5	1.000	.999	.967	.617	.193	.029	.002	.000	.000	.000	.000	.000	.000
	6	1.000	1.000	.991	.780	.341	.074	.007	.000	.000	.000	.000	.000	.000
	7	1.000	1.000	.998	.891	.512	.154	.022	.001	.000	.000	.000	.000	.000
	8	1.000	1.000	1.000	.953	.677	.274	.054	.004	.000	.000	.000	.000	.000
	9	1.000	1.000	1.000	.983	.811	.425	.115	.013	.000	.000	.000	.000	.000
	10	1.000	1.000	1.000	.994	.902	.586	.212	.034	.002	.000	.000	.000	.000
	11	1.000	1.000	1.000	.998	.956	.732	.345	.078	.006	.000	.000	.000	.000

TABLE 1 (concluded) Cumulative Binomial Distribution

<i>n</i>	<i>x</i>	<i>p</i>												
		.01	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95	.99
12	12	1.000	1.000	1.000	1.000	.983	.846	.500	.154	.017	.000	.000	.000	.000
13	13	1.000	1.000	1.000	1.000	.994	.922	.655	.268	.044	.002	.000	.000	.000
14	14	1.000	1.000	1.000	1.000	.998	.966	.788	.414	.098	.006	.000	.000	.000
15	15	1.000	1.000	1.000	1.000	1.000	.987	.885	.575	.189	.017	.000	.000	.000
16	16	1.000	1.000	1.000	1.000	1.000	.996	.946	.726	.323	.047	.000	.000	.000
17	17	1.000	1.000	1.000	1.000	1.000	.999	.978	.846	.488	.109	.002	.000	.000
18	18	1.000	1.000	1.000	1.000	1.000	1.000	.993	.926	.659	.220	.009	.000	.000
19	19	1.000	1.000	1.000	1.000	1.000	1.000	.998	.971	.807	.383	.033	.001	.000
20	20	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.991	.910	.579	.098	.007	.000
21	21	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.998	.967	.766	.236	.034	.000
22	22	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.991	.902	.463	.127	.002
23	23	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.998	.973	.729	.358	.026
24	24	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	.996	.928	.723	.222