

Table 6.6 Values of  $\Delta^*$  to Determine Numbers of Replications in CRD\*

$r$	$\frac{t=2}{1-\beta}$			$\frac{t=3}{1-\beta}$			$\frac{t=4}{1-\beta}$		
	.7	.8	.9	.7	.8	.9	.7	.8	.9
2	4.863	5.653	6.796	4.883	5.570	6.548	4.872	5.504	6.395
3	2.703	3.071	3.589	2.957	3.325	3.838	3.094	3.460	3.967
4	2.104	2.381	2.767	2.335	2.618	3.010	2.468	2.754	3.148
5	1.792	2.024	2.348	1.997	2.236	2.568	2.119	2.362	2.698
6	1.590	1.796	2.081	1.775	1.987	2.280	1.888	2.104	2.401
7	1.446	1.632	1.890	1.615	1.808	2.073	1.719	1.916	2.186
8	1.335	1.507	1.745	1.492	1.670	1.915	1.590	1.771	2.020
9	1.247	1.407	1.629	1.394	1.560	1.788	1.486	1.655	1.888
10	1.175	1.325	1.534	1.313	1.469	1.684	1.400	1.559	1.778
11	1.113	1.256	1.454	1.245	1.393	1.596	1.328	1.479	1.686
12	1.061	1.197	1.385	1.186	1.327	1.521	1.266	1.409	1.607
13	1.016	1.145	1.326	1.135	1.270	1.456	1.211	1.349	1.538
14	0.975	1.100	1.273	1.090	1.220	1.398	1.164	1.296	1.478
15	0.940	1.060	1.226	1.050	1.175	1.347	1.121	1.249	1.424
16	0.908	1.024	1.185	1.015	1.135	1.301	1.083	1.206	1.375
17	0.879	0.991	1.147	0.982	1.099	1.259	1.049	1.168	1.331
18	0.852	0.961	1.112	0.953	1.066	1.222	1.017	1.133	1.292
19	0.828	0.934	1.081	0.926	1.036	1.187	0.988	1.101	1.255
20	0.806	0.909	1.052	0.901	1.008	1.155	0.962	1.071	1.222
21	0.786	0.886	1.025	0.878	0.982	1.126	0.938	1.044	1.191
22	0.767	0.865	1.000	0.857	0.959	1.099	0.915	1.019	1.162
23	0.749	0.845	0.977	0.837	0.936	1.073	0.894	0.996	1.135
24	0.733	0.826	0.956	0.819	0.916	1.050	0.874	0.974	1.110
25	0.717	0.809	0.936	0.802	0.897	1.028	0.856	0.953	1.087

Table 6.6 (Continued)

$r$	$\frac{t=5}{1-\beta}$			$\frac{t=6}{1-\beta}$			$\frac{t=7}{1-\beta}$		
	.7	.8	.9	.7	.8	.9	.7	.8	.9
2	4.889	5.490	6.333	4.922	5.505	6.317	4.963	5.534	6.327
3	3.197	3.562	4.065	3.283	3.647	4.149	3.358	3.723	4.224
4	2.568	2.856	3.251	2.650	2.940	3.337	2.721	3.013	3.412
5	2.211	2.457	2.795	2.287	2.535	2.876	2.352	2.602	2.945
6	1.973	2.191	2.492	2.042	2.264	2.567	2.102	2.326	2.632
7	1.798	1.997	2.271	1.863	2.065	2.341	1.919	2.123	2.401
8	1.664	1.848	2.100	1.725	1.911	2.166	1.777	1.965	2.223
9	1.556	1.728	1.963	1.613	1.787	2.026	1.662	1.839	2.080
10	1.466	1.628	1.850	1.521	1.685	1.910	1.568	1.734	1.961
11	1.391	1.544	1.755	1.443	1.599	1.812	1.488	1.645	1.861
12	1.326	1.472	1.673	1.376	1.524	1.727	1.419	1.569	1.774
13	1.269	1.409	1.602	1.317	1.459	1.654	1.358	1.502	1.699
14	1.220	1.354	1.539	1.266	1.402	1.589	1.305	1.444	1.633
15	1.175	1.305	1.483	1.220	1.351	1.531	1.258	1.391	1.573
16	1.135	1.261	1.432	1.178	1.306	1.479	1.216	1.344	1.520
17	1.099	1.221	1.387	1.141	1.264	1.433	1.177	1.302	1.472
18	1.066	1.184	1.345	1.107	1.226	1.390	1.142	1.263	1.428
19	1.036	1.151	1.307	1.076	1.192	1.351	1.110	1.228	1.388
20	1.009	1.120	1.273	1.047	1.160	1.315	1.081	1.195	1.351
21	0.983	1.092	1.240	1.021	1.131	1.282	1.053	1.165	1.317
22	0.960	1.065	1.210	0.996	1.104	1.251	1.028	1.137	1.285
23	0.938	1.041	1.183	0.973	1.078	1.222	1.004	1.111	1.256
24	0.917	1.018	1.157	0.952	1.055	1.195	0.982	1.086	1.228
25	0.898	0.997	1.132	0.932	1.033	1.170	0.962	1.064	1.203

Table 6.6 (Continued)

$r$	$\frac{t=8}{1-\beta}$			$\frac{t=9}{1-\beta}$			$\frac{t=10}{1-\beta}$		
	.7	.8	.9	.7	.8	.9	.7	.8	.9
2	5.009	5.572	6.350	5.056	5.613	6.382	5.104	5.657	6.419
3	3.426	3.791	4.293	3.488	3.854	4.356	3.545	3.913	4.416
4	2.784	3.078	3.479	2.841	3.136	3.540	2.893	3.191	3.596
5	2.409	2.662	3.008	2.461	2.716	3.064	2.509	2.766	3.116
6	2.155	2.381	2.689	2.203	2.431	2.741	2.247	2.477	2.789
7	1.968	2.174	2.455	2.013	2.221	2.504	2.054	2.263	2.548
8	1.823	2.014	2.274	1.865	2.057	2.319	1.903	2.097	2.361
9	1.706	1.884	2.128	1.746	1.926	2.171	1.782	1.963	2.210
10	1.609	1.777	2.006	1.647	1.816	2.048	1.681	1.852	2.085
11	1.527	1.687	1.904	1.563	1.724	1.943	1.596	1.758	1.979
12	1.457	1.609	1.816	1.491	1.644	1.853	1.522	1.677	1.888
13	1.395	1.540	1.739	1.428	1.575	1.775	1.458	1.606	1.808
14	1.340	1.480	1.671	1.372	1.513	1.706	1.401	1.544	1.738
15	1.292	1.427	1.611	1.323	1.459	1.644	1.351	1.488	1.675
16	1.248	1.379	1.556	1.278	1.410	1.589	1.305	1.438	1.619
17	1.209	1.335	1.507	1.238	1.365	1.539	1.264	1.393	1.568
18	1.173	1.295	1.462	1.201	1.325	1.493	1.227	1.351	1.521
19	1.140	1.259	1.421	1.167	1.288	1.451	1.192	1.314	1.479
20	1.110	1.226	1.384	1.136	1.253	1.413	1.161	1.279	1.440
21	1.082	1.195	1.349	1.108	1.222	1.377	1.131	1.247	1.403
22	1.056	1.166	1.316	1.081	1.193	1.344	1.104	1.217	1.370
23	1.032	1.139	1.286	1.057	1.165	1.313	1.079	1.189	1.338
24	1.009	1.114	1.258	1.033	1.140	1.285	1.056	1.163	1.309
25	0.988	1.091	1.232	1.012	1.116	1.258	1.033	1.139	1.282

Table 6.6 (Continued)

$r$	$\frac{t=11}{1-\beta}$			$\frac{t=13}{1-\beta}$			$\frac{t=15}{1-\beta}$		
	.7	.8	.9	.7	.8	.9	.7	.8	.9
2	5.152	5.702	6.458	5.245	5.792	6.541	5.334	5.879	6.625
3	3.599	3.968	4.472	3.697	4.069	4.576	3.785	4.161	4.670
4	2.942	3.241	3.649	3.030	3.333	3.744	3.109	3.415	3.830
5	2.553	2.812	3.164	2.633	2.895	3.251	2.705	2.970	3.329
6	2.288	2.519	2.834	2.361	2.596	2.914	2.426	2.664	2.986
7	2.091	2.303	2.590	2.160	2.374	2.665	2.220	2.437	2.732
8	1.939	2.134	2.400	2.002	2.201	2.470	2.059	2.260	2.533
9	1.815	1.998	2.247	1.875	2.061	2.313	1.929	2.117	2.372
10	1.713	1.885	2.120	1.770	1.945	2.183	1.820	1.998	2.239
11	1.626	1.790	2.012	1.680	1.847	2.073	1.728	1.897	2.126
12	1.551	1.707	1.920	1.603	1.762	1.977	1.649	1.810	2.029
13	1.486	1.635	1.839	1.536	1.688	1.894	1.580	1.734	1.944
14	1.428	1.572	1.767	1.476	1.622	1.821	1.519	1.667	1.868
15	1.376	1.515	1.704	1.423	1.564	1.755	1.464	1.607	1.801
16	1.330	1.464	1.646	1.375	1.512	1.696	1.415	1.554	1.741
17	1.288	1.418	1.595	1.332	1.464	1.643	1.371	1.505	1.686
18	1.250	1.376	1.547	1.293	1.421	1.594	1.330	1.460	1.636
19	1.215	1.338	1.504	1.257	1.381	1.550	1.293	1.420	1.591
20	1.183	1.302	1.464	1.223	1.345	1.509	1.259	1.382	1.549
21	1.153	1.270	1.427	1.193	1.311	1.471	1.228	1.348	1.510
22	1.126	1.239	1.393	1.164	1.279	1.436	1.198	1.315	1.474
23	1.100	1.211	1.361	1.138	1.250	1.403	1.171	1.285	1.440
24	1.076	1.184	1.332	1.113	1.223	1.373	1.145	1.257	1.409
25	1.053	1.160	1.304	1.090	1.197	1.344	1.122	1.231	1.379

Table 6.6 (Continued)

$r$	$\frac{t = 20}{1 - \beta}$			$\frac{t = 25}{1 - \beta}$			$\frac{t = 30}{1 - \beta}$		
	.7	.8	.9	.7	.8	.9	.7	.8	.9
2	5.539	6.086	6.829	5.722	6.272	7.018	5.886	6.441	7.191
3	3.977	4.359	4.877	4.138	4.527	5.053	4.279	4.674	5.208
4	3.278	3.592	4.015	3.419	3.739	4.171	3.542	3.868	4.307
5	2.856	3.129	3.497	2.983	3.261	3.637	3.092	3.376	3.758
6	2.565	2.810	3.139	2.681	2.931	3.268	2.780	3.036	3.379
7	2.349	2.572	2.874	2.455	2.684	2.993	2.548	2.781	3.095
8	2.179	2.386	2.666	2.279	2.491	2.777	2.365	2.582	2.874
9	2.042	2.236	2.498	2.136	2.335	2.603	2.217	2.420	2.694
10	1.928	2.111	2.359	2.017	2.205	2.458	2.094	2.286	2.544
11	1.831	2.005	2.240	1.916	2.094	2.335	1.989	2.171	2.417
12	1.747	1.913	2.138	1.829	1.999	2.228	1.899	2.073	2.307
13	1.674	1.833	2.048	1.752	1.916	2.135	1.820	1.986	2.211
14	1.610	1.763	1.969	1.685	1.842	2.053	1.750	1.910	2.126
15	1.552	1.700	1.899	1.625	1.776	1.980	1.687	1.842	2.050
16	1.500	1.643	1.835	1.571	1.717	1.914	1.631	1.781	1.981
17	1.453	1.591	1.778	1.521	1.663	1.854	1.580	1.725	1.920
18	1.410	1.544	1.725	1.477	1.614	1.799	1.534	1.674	1.863
19	1.371	1.502	1.677	1.436	1.569	1.749	1.491	1.628	1.811
20	1.335	1.462	1.633	1.398	1.528	1.703	1.452	1.585	1.764
21	1.302	1.425	1.592	1.363	1.490	1.661	1.416	1.545	1.720
22	1.271	1.391	1.554	1.331	1.454	1.621	1.382	1.509	1.679
23	1.242	1.360	1.519	1.300	1.421	1.584	1.351	1.474	1.641
24	1.215	1.330	1.486	1.272	1.390	1.550	1.321	1.442	1.605
25	1.189	1.302	1.455	1.246	1.361	1.518	1.294	1.412	1.572

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