

Table 43. ANOVA tables of FMRG for each test (part two)

Monkey Tests on 20-bit Words					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.09075	0.04537511	0.5041512	0.6050802
B	1	0.02638	0.02638383	0.2931439	0.5890495
K:B	2	0.06917	0.03458367	0.3842502	0.6816571
Residuals	144	12.96043	0.09000298		
The Craps Test 11a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.05190	0.02595075	0.2864609	0.7513433
B	1	0.03747	0.03746980	0.4136155	0.5211629
K:B	2	0.13996	0.06997809	0.7724627	0.4637784
Residuals	144	13.04509	0.09059090		
The Craps Test 11b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.23422	0.1171079	1.529358	0.2201730
B	1	0.02530	0.0253023	0.330432	0.5663016
K:B	2	0.27356	0.1367809	1.786276	0.1712763
Residuals	144	11.02655	0.0765732		
Minimum Distance Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.32503	0.1625162	2.156961	0.1193992
B	1	0.00409	0.0040890	0.054270	0.8161239
K:B	2	0.12057	0.0602825	0.800087	0.4512769
Residuals	144	10.84968	0.0753450		
Overlapping Permutations 13a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.57893	0.2894666	2.377413	0.0964234
B	1	0.03440	0.0344035	0.282559	0.5958481
K:B	2	0.01602	0.0080083	0.065773	0.9363714
Residuals	144	17.53300	0.1217569		
Overlapping Permutations 13b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.65731	0.3286569	2.954705	0.0552610
B	1	0.17268	0.1726768	1.552406	0.2148039
K:B	2	0.14312	0.0715587	0.643330	0.5270433
Residuals	144	16.01736	0.1112317		

Sparse Occupancy Tests OPSO, OQSO, DNA 14a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.10302	0.0515076	0.602638	0.5487402
B	1	0.02726	0.0272561	0.318896	0.5731503
K:B	2	0.29259	0.1462949	1.711649	0.1842207
Residuals	144	12.30770	0.0854702		
Sparse Occupancy Tests OPSO, OQSO, DNA 14b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.02974	0.01487222	0.1755190	0.8392007
B	1	0.00236	0.00236194	0.0278752	0.8676368
K:B	2	0.04504	0.02252110	0.2657896	0.7669757
Residuals	144	12.20153	0.08473282		
Sparse Occupancy Tests OPSO, OQSO, DNA 14c					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.28324	0.1416179	1.609860	0.2034924
B	1	0.14975	0.1497528	1.702334	0.1940643
K:B	2	0.11764	0.0588211	0.668656	0.5139803
Residuals	144	12.66755	0.0879691		
The Squeeze Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.17398	0.0869920	1.042205	0.3553208
B	1	0.20809	0.2080864	2.492974	0.1165496
K:B	2	0.17358	0.0867913	1.039801	0.3561638
Residuals	144	12.01955	0.0834691		
Sum					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	2	0.031976	0.01598821	0.926211	0.3983980
B	1	0.010638	0.01063830	0.616286	0.4337205
K:B	2	0.034726	0.01736323	1.005867	0.3682824
Residuals	144	2.485722	0.01726196		

Table 44. ANOVA tables of DX for each test (part one)

Overlapping Sums Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.00393	0.003925 7	0.047483	0.827618 4
S	3	0.30377	0.101255 8	1.224743	0.300410 6
B	1	0.02327	0.023265 6	0.281410	0.596085 4
K:S	3	0.30420	0.101400 1	1.226487	0.299775 9
K:B	1	0.17701	0.177005 2	2.140971	0.144229 1
S:B	3	0.22607	0.075355 6	0.911465	0.435448 3
K:S:B	3	0.14489	0.048295 2	0.584156	0.625709 7
Residuals	384	31.74728	0.082675 2		
Runs Test 2a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.00502	0.005019 39	0.056185	0.812757 2
S	3	0.04679	0.015597 35	0.174590	0.913567 1
B	1	0.00522	0.00522 071	0.058438	0.809110 5
K:S	3	0.28180	0.093934 23	1.051459	0.369720 3
K:B	1	0.04817	0.048172 94	0.539227	0.463201 3
S:B	3	0.20357	0.067857 33	0.759566	0.517343 2
K:S:B	3	0.14858	0.049526 77	0.554381	0.645479 7
Residuals	384	34.30541	0.089337 01		
Runs Test 2b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.13060	0.130602 1	1.545191	0.214605 2
S	3	0.09484	0.031613 4	0.374028	0.771789 2
B	1	0.01497	0.014970 0	0.177114	0.674100 6
K:S	3	0.34802	0.116005 2	1.372491	0.250775 2
K:B	1	0.01215	0.012148 8	0.143736	0.704804 5
S:B	3	0.55523	0.185076 03	2.189687	0.08880 0
K:S:B	3	0.65560	0.218532 8	2.585525	0.05289 02
Residuals	384	32.45632	0.084521 7		
Runs Test 2c					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.00726	0.007262 3	0.091132	0.762906 7
S	3	0.25388	0.084627 7	1.061955	0.365154 4
B	1	0.06332	0.063317 2	0.794539	0.373289 2
K:S	3	0.46295	0.154316 9	1.936454	0.123173 4
K:B	1	0.20688	0.206881 7	2.596066	0.107950 9
S:B	3	0.34554	0.1151810	1.445355	0.229170 6
K:S:B	3	0.65627	0.218756 9	2.745082	0.042842 0
Residuals	384	30.60114	0.079690 5		

Runs Test 2d					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.00849	0.00848 53	0.100499	0.751403 8
S	3	0.45660	0.152200 2	1.802642	0.146172 2
B	1	0.01043	0.010434 6	0.123586	0.725370 4
K:S	3	0.12834	0.042781 5	0.506700	0.677875 9
K:B	1	0.21837	0.218367 3	2.586318	0.108612 5
S:B	3	0.19103	0.063678 1	0.754196	0.520444 0
K:S:B	3	0.15006	0.05002 04	0.592436	0.620278 2
Residuals	384	32.42178	0.084431 7		
Random Spheres Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.19005	0.190053 2	2.316454	0.128834 6
S	3	0.20862	0.069539 8	0.847583	0.468523 4
B	1	0.25310	0.253100 3	3.08490 0	0.079819 2
K:S	3	0.17075	0.056916 0	0.693718	0.556328 8
K:B	1	0.00647	0.00646 88	0.078845	0.779020 2
S:B	3	0.16727	0.055755 3	0.679570	0.564976 5
K:S:B	3	0.26546	0.08848 63	1.078510	0.358052 3
Residuals	384	31.50524	0.08204 49		
Parking Lot Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.00175	0.001748 3	0.02034 8	0.886644 3
S	3	0.09922	0.033073 3	0.384926	0.763925 7
B	1	0.01438	0.014378 9	0.167350	0.682706 2
K:S	3	0.33409	0.111364 5	1.296123	0.275413 0
K:B	1	0.00448	0.004475 3	0.05208 6	0.819593 6
S:B	3	0.38629	0.128764 8	1.498637	0.214476 6
K:S:B	3	0.14181	0.047270 2	0.550157	0.648314 0
Residuals	384	32.99375	0.085921 2		
Birthday Spacings					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.00104	0.001039 3	0.012654	0.910492 7
S	3	0.12008	0.04002 51	0.487334	0.691271 7
B	1	0.03876	0.038760 5	0.471936	0.492512 4
K:S	3	0.39965	0.133215 6	1.621994	0.183763 2
K:B	1	0.07630	0.076302 5	0.929037	0.335719 8
S:B	3	0.06504	0.021678 6	0.263952	0.851363 2
K:S:B	3	0.15459	0.051530 3	0.627417	0.597662 3
Residuals	384	31.53821	0.082130 8		

Table 44. ANOVA tables of DX for each test (part two)

Count the 1's in Specific Bytes					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.15614	0.156141 4	1.877561	0.171412 2
S	3	0.07749	0.02583 01	0.310600	0.817727 7
B	1	0.07050	0.070496 5	0.847702	0.357781 3
K:S	3	0.37267	0.124224 3	1.493766	0.215782 8
K:B	1	0.02535	0.025351 2	0.304841	0.581184 5
S:B	3	0.23906	0.079685 0	0.958192	0.412493 4
K:S:B	3	0.10615	0.035382 2	0.425462	0.734857 3
Residuals	384	31.93415	0.083161 8		
Ranks of 6x8 Matrices					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.09184	0.091844 8	1.026457	0.311630 1
S	3	0.16495	0.054983 3	0.614493	0.605954 6
B	1	0.01923	0.019229 4	0.214908	0.643209 9
K:S	3	0.02831	0.00943 66	0.105464	0.956862 9
K:B	1	0.44419	0.444191 1	4.964280	0.026454 7
S:B	3	0.23803	0.079344 0	0.886749	0.448011 5
K:S:B	3	0.00390	0.001298 5	0.014512	0.997611 0
Residuals	384	34.35934	0.089477 4		
Ranks of 31x31 and 32x32 matrices 8a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.00321	0.003212 5	0.083555	0.772692 3
S	3	0.32008	0.106692 1	2.775015	0.041177 6
B	1	0.02167	0.021673 1	0.563708	0.453229 9
K:S	3	0.07228	0.02409 22	0.626626	0.598167 7
K:B	1	0.03414	0.034138 3	0.887922	0.346633 5
S:B	3	0.04977	0.016589 8	0.431494	0.730561 5
K:S:B	3	0.14055	0.04685 06	1.218563	0.302668 0
Residuals	384	14.76380	0.038447 4		
Ranks of 31x31 and 32x32 matrices 8b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.03019	0.030192 09	0.638984 7	0.424572 8
S	3	0.07089	0.023629 70	0.50009 86	0.682427 4
B	1	0.00884	0.00884 029	0.187095 7	0.665587 8
K:S	3	0.01446	0.004818 51	0.101978 8	0.958855 9
K:B	1	0.04412	0.044116 00	0.933670 3	0.334519 2
S:B	3	0.14087	0.046957 79	0.993813 9	0.395684 3
K:S:B	3	0.07369	0.024563 60	0.519863 7	0.668845 9
Residuals	384	18.14403	0.047250 09		

Monkey Tests on 20-bit Words					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.02251	0.02250 81	0.252659	0.615496 9
S	3	0.69758	0.232526 5	2.610168	0.051199 8
B	1	0.09051	0.090511 4	1.016013	0.314101 3
K:S	3	0.27147	0.09048 94	1.015766	0.385618 4
K:B	1	0.09512	0.095123 7	1.067788	0.30209 60
S:B	3	0.28991	0.096636 1	1.084765	0.355400 5
K:S:B	3	0.04557	0.015190 2	0.170514	0.916276 6
Residuals	384	34.20859	0.08908 49		
The Craps Test 11a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.02369	0.023692 9	0.274969	0.60032 06
S	3	0.08456	0.028185 5	0.327108	0.805765 2
B	1	0.03779	0.037794 3	0.438623	0.508185 0
K:S	3	0.69794	0.232645 6	2.699979	0.045475 4
K:B	1	0.10477	0.104771 3	1.215928	0.270851 9
S:B	3	0.14310	0.047701 1	0.553598	0.646005 0
K:S:B	3	0.01021	0.00340 26	0.03948 9	0.989515 2
Residuals	384	33.08763	0.086165 7		
The Craps Test 11b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.05326	0.053263 2	0.645989	0.422047 7
S	3	0.25044	0.08348 05	1.012472	0.387114 6
B	1	0.12349	0.123491 4	1.497734	0.221770 7
K:S	3	0.12706	0.042354 9	0.513691	0.673072 3
K:B	1	0.00091	0.000913 0	0.011073	0.916249 6
S:B	3	0.24905	0.083015 4	1.006832	0.38968 84
K:S:B	3	0.18156	0.06052 07	0.734010	0.532225 3
Residuals	384	31.66163	0.082452 2		
Minimum Distance Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.24178	0.241776 8	3.171791	0.075710 7
S	3	0.09815	0.032717 1	0.429206	0.732190 4
B	1	0.25804	0.258036 9	3.385102	0.066559 8
K:S	3	0.28582	0.095274 3	1.249872	0.291385 5
K:B	1	0.39333	0.393329 4	5.159961	0.023666 1
S:B	3	0.26192	0.08730 81	1.145367	0.330585 3
K:S:B	3	0.30748	0.102492 0	1.344559	0.259542 9
Residuals	384	29.27125	0.076227 2		

Table 44. ANOVA tables of DX for each test (part three)

Overlapping Permutations 13a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.09831	0.0983060	0.953840	0.3293586
S	3	0.58188	0.1939603	1.881951	0.1320893
B	1	0.02690	0.0269014	0.261018	0.6097152
K:S	3	0.58569	0.1952286	1.894258	0.1300237
K:B	1	0.22382	0.2238169	2.171643	0.1413952
S:B	3	0.16267	0.0542244	0.526126	0.6645723
K:S:B	3	0.16538	0.0551278	0.534892	0.6586158
Residuals	384	39.57634	0.1030634		
Overlapping Permutations 13b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.01642	0.0164190	0.142942	0.7055829
S	3	0.09627	0.0320887	0.279359	0.8402971
B	1	0.02318	0.0231830	0.201828	0.6535028
K:S	3	0.48575	0.1619177	1.409630	0.2395389
K:B	1	0.34745	0.3474499	3.024845	0.0827995
S:B	3	0.75300	0.2509996	2.185164	0.0893237
K:S:B	3	0.23146	0.0771528	0.671681	0.5698399
Residuals	384	44.10829	0.1148653		
Sparse Occupancy Tests OPSO, OQSO, DNA 14a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.20260	0.2026008	2.171917	0.1413702
S	3	0.03038	0.0101278	0.108572	0.9550665
B	1	0.11974	0.1197419	1.283655	0.2579275
K:S	3	0.11457	0.0381895	0.409398	0.7463378
K:B	1	0.00130	0.0013049	0.013988	0.9059140
S:B	3	0.30006	0.1000211	1.072244	0.3607263
K:S:B	3	0.14637	0.0487899	0.523036	0.6666790
Residuals	384	35.82030	0.0932820		
Sparse Occupancy Tests OPSO, OQSO, DNA 14b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.02200	0.0220000	0.279426	0.5973831
S	3	0.00951	0.0031699	0.040261	0.9892137
B	1	0.04462	0.0446245	0.566783	0.4520015
K:S	3	0.28755	0.0958510	1.217419	0.3030877
K:B	1	0.13229	0.1322870	1.680198	0.1956766
S:B	3	1.07495	0.3583161	4.551028	0.0037873
K:S:B	3	0.70936	0.2364535	3.003232	0.0304124
Residuals	384	30.23347	0.0787330		

Sparse Occupancy Tests OPSO, OQSO, DNA 14c					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.04382	0.0438241	0.527081	0.4682788
S	3	0.55353	0.1845086	2.219124	0.0854656
B	1	0.00005	0.0000457	0.000550	0.9813047
K:S	3	0.21187	0.0706226	0.849393	0.4675588
K:B	1	0.08978	0.0897798	1.079800	0.2993961
S:B	3	0.18591	0.0619709	0.745337	0.5255900
K:S:B	3	0.30328	0.1010931	1.215868	0.3036573
Residuals	384	31.92761	0.0831448		
The Squeeze Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.02961	0.0296146	0.351601	0.5535573
S	3	0.34381	0.1146026	1.360626	0.2544659
B	1	0.14702	0.1470198	1.745501	0.1872300
K:S	3	0.17824	0.0594128	0.705382	0.5492710
K:B	1	0.00034	0.0003366	0.003996	0.9496276
S:B	3	0.01225	0.0040835	0.048482	0.9858517
K:S:B	3	0.14565	0.0485488	0.576399	0.6308247
Residuals	384	32.34349	0.0842278		
Sum					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
K	1	0.000011	0.00001060	0.000689	0.9790786
S	3	0.024229	0.00807644	0.524751	0.6655094
B	1	0.003492	0.00349156	0.226857	0.6341350
K:S	3	0.033405	0.01113511	0.723482	0.5384477
K:B	1	0.062184	0.06218385	4.040275	0.0451255
S:B	3	0.044660	0.01488678	0.967240	0.4081680
K:S:B	3	0.021108	0.00703600	0.457151	0.7123961
Residuals	384	5.910142	0.01539100		

Table 45. ANOVA tables of FMRG & DX for each test (part one)

Overlapping Sums Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.63611	0.06361063	0.7548814	0.6725081
B	1	0.00786	0.00786465	0.0933315	0.7601042
RNG:B	10	0.76947	0.07694728	0.9131504	0.5205847
Residuals	528	44.49231	0.08426573		
Runs Test 2a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.41832	0.04183195	0.4682595	0.9104676
B	1	0.00026	0.00025908	0.0029001	0.9570728
RNG:B	10	0.41945	0.04194471	0.4695217	0.9097028
Residuals	528	47.16887	0.08933498		
Runs Test 2b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.65582	0.0655823	0.774810	0.6532518
B	1	0.07758	0.0775764	0.916513	0.3388304
RNG:B	10	1.28078	0.1280781	1.513157	0.1309233
Residuals	528	44.69150	0.0846430		
Runs Test 2c					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.76624	0.0766241	0.933849	0.5013989
B	1	0.00917	0.0091653	0.111702	0.7383479
RNG:B	10	1.37188	0.1371881	1.671966	0.0840776
Residuals	528	43.32342	0.0820519		
Runs Test 2d					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	1.20428	0.1204276	1.403437	0.1750264
B	1	0.00070	0.0006979	0.008133	0.9281755
RNG:B	10	0.74786	0.0747856	0.871536	0.5598788
Residuals	528	45.30718	0.0858091		
Random Spheres Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.61194	0.0611944	0.739354	0.6874405
B	1	0.17482	0.1748233	2.112225	0.1467208
RNG:B	10	0.71669	0.0716691	0.865910	0.5652515
Residuals	528	43.70115	0.0827673		

Parking Lot Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.56466	0.05646579	0.6431584	0.7769508
B	1	0.02986	0.02985533	0.3400591	0.5600441
RNG:B	10	0.82742	0.08274193	0.9424498	0.4935084
Residuals	528	46.35551	0.08779452		
Birthday Spacings					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.75085	0.07508471	0.9067179	0.5265998
B	1	0.00541	0.00540806	0.0653073	0.7983955
RNG:B	10	0.38036	0.03803608	0.4593211	0.9157866
Residuals	528	43.72333	0.08280933		
Count the 1's in Specific Bytes					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.62812	0.06281237	0.756382	0.6710607
B	1	0.00401	0.00401047	0.048294	0.8261441
RNG:B	10	0.89188	0.08918766	1.073992	0.3803585
Residuals	528	43.84677	0.08304313		
Ranks of 6x8 Matrices					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.59080	0.05908030	0.6772379	0.7460249
B	1	0.06391	0.06391139	0.7326168	0.3924246
RNG:B	10	0.75908	0.07590780	0.8701317	0.5612184
Residuals	528	46.06121	0.08723713		
Ranks of 31x31 and 32x32 matrices 8a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.47724	0.0477236	1.215045	0.2781949
B	1	0.13302	0.1330170	3.386616	0.0662887
RNG:B	10	0.34476	0.0344762	0.877764	0.5539458
Residuals	528	20.73840	0.0392773		
Ranks of 31x31 and 32x32 matrices 8b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.15502	0.01550208	0.3308013	0.9727809
B	1	0.01494	0.01493785	0.3187611	0.5725929
RNG:B	10	0.34780	0.03477951	0.7421651	0.6847432
Residuals	528	24.74326	0.04686223		

Table 45. ANOVA tables of FMRG & DX for each test (part two)

Monkey Tests on 20-bit Words					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	1.10332	0.1103323	1.235036	0.2654631
B	1	0.02949	0.0294946	0.330156	0.5658119
RNG:B	10	0.58717	0.0587171	0.657267	0.7642805
Residuals	528	47.16902	0.0893353		
The Craps Test 11a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.86487	0.08648728	0.9898675	0.4509886
B	1	0.00419	0.00418635	0.0479138	0.8268186
RNG:B	10	0.46912	0.04691164	0.5369148	0.8642152
Residuals	528	46.13272	0.08737258		
The Craps Test 11b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.66508	0.0665079	0.822621	0.6069255
B	1	0.14650	0.1465025	1.812054	0.1788396
RNG:B	10	0.70737	0.0707374	0.874935	0.5566385
Residuals	528	42.68817	0.0808488		
Minimum Distance Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	1.09236	0.1092363	1.437573	0.1601477
B	1	0.15985	0.1598455	2.103601	0.1475464
RNG:B	10	1.18558	0.1185575	1.560242	0.1151169
Residuals	528	40.12093	0.0759866		
Overlapping Permutations 13a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	1.84499	0.1844989	1.705770	0.0762760
B	1	0.05605	0.0560451	0.518160	0.4719460
RNG:B	10	0.57315	0.0573150	0.529901	0.8693541
Residuals	528	57.10934	0.1081616		
Overlapping Permutations 13b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	1.31788	0.1317877	1.157308	0.3174190
B	1	0.00760	0.0075974	0.066718	0.7962781
RNG:B	10	1.66329	0.1663287	1.460633	0.1507025
Residuals	528	60.12566	0.1138744		

Sparse Occupancy Tests OPSO, OQSO, DNA 14a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.45578	0.0455778	0.500022	0.8902211
B	1	0.14540	0.1454045	1.595195	0.2071429
RNG:B	10	0.74192	0.0741921	0.813943	0.6153274
Residuals	528	48.12800	0.0911515		
Sparse Occupancy Tests OPSO, OQSO, DNA 14c					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	1.15445	0.1154451	1.366853	0.1922082
B	1	0.04321	0.0432055	0.511547	0.4747863
RNG:B	10	0.80321	0.0803207	0.950985	0.4857291
Residuals	528	44.59515	0.0844605		
The Squeeze Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	1.13613	0.1136126	1.352195	0.1994631
B	1	0.31947	0.3194690	3.802256	0.0517125
RNG:B	10	0.36745	0.0367453	0.437336	0.9281373
Residuals	528	44.36305	0.0840209		
Sum					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
RNG	10	0.112157	0.01121573	0.705336	0.7198077
B	1	0.000012	0.00001206	0.000758	0.9780406
RNG:B	10	0.176796	0.01767964	1.111839	0.3508569
Residuals	528	8.395864	0.01590126		

Table 46. ANOVA tables of LCG for each test (part one)

Overlapping Sums Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.025356	0.012678 11	0.145523 4	0.864823 3
Residuals	72	6.272693	0.087120 74		
Runs Test 2a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	3.746492	1.873246	28.32776	8.405158 e-010
Residuals	72	4.761184	0.066128		
Runs Test 2b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	4.549097	2.274548	42.9659	5.236922 e-013
Residuals	72	3.811568	0.052938		
Runs Test 2c					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	3.694858	1.847429	32.42076	9.122736 e-011
Residuals	72	4.102768	0.056983		
Runs Test 2d					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	3.334527	1.667264	24.41615	8.042306 e-009
Residuals	72	4.916540	0.06828 5		
Random Spheres Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	5.766519	2.883260	49.65932	2.797762 e-014
Residuals	72	4.180377	0.058061		
Parking Lot Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	3.452581	1.726290	29.58107	4.196271 e-010
Residuals	72	4.201771	0.058358		

Birthday Spacings					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.00000 41076	2.053805 e-006	0.322547 6	0.725342 6
Residuals	72	0.00045 84562	6.367447 e-006		
Count the 1's in Specific Bytes					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.018913 37	0.009456 685	10.83853	0.00007 676675
Residuals	72	0.06282 045	0.00087 2506		
Ranks of 6x8 Matrices					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.070547 55	0.035273 78	30.96228	1.98153e- 010
Residuals	72	0.08202 598	0.001139 25		
Ranks of 31x31 and 32x32 matrices 8a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.045512	0.022755 8	0.477449 2	0.622313 8
Residuals	72	3.431606	0.047661 2		
Ranks of 31x31 and 32x32 matrices 8b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	9.86080 0e-032	4.930381 e-032	1	0.372930 5
Residuals	72	3.549874 e-030	4.930381 e-032		
COUNT-THE-1's TEST on a stream of bytes 9a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	9.86080 0e-032	4.930381 e-032	1	0.372930 5
Residuals	72	3.549874 e-030	4.930381 e-032		
COUNT-THE-1's TEST on a stream of bytes 9b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	9.86080 0e-032	4.930381 e-032	1	0.372930 5
Residuals	72	3.549874 e-030	4.930381 e-032		

Table 46. ANOVA tables of LCG for each test (part two)

Monkey Tests on 20-bit Words					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	9.86080 0e-032	4.930381 e-032	1	0.372930 5
Residuals	72	3.549874 e-030	4.930381 e-032		
The Craps Test 11a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.014673	0.007336 5	0.063973 39	0.93808 32
Residuals	72	8.256949	0.114679 8		
The Craps Test 11b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	1.793731	0.896865 4	7.900864	0.00079 04231
Residuals	72	8.173070	0.113514 9		
Minimum Distance Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	1.967014	0.983506 9	38.76781	3.742451 e-012
Residuals	72	1.826580	0.025369 2		
Overlapping Permutations 13a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	3.768779	1.884389	21.24396	5.605612 e-008
Residuals	72	6.386571	0.08870 2		
Overlapping Permutations 13b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	6.289653	3.144827	36.57196	1.094491 e-011
Residuals	72	6.191287	0.08599 0		

  

Sparse Occupancy Tests OPSO, OQSO, DNA 14a					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.007540 90	0.003770 451	7.735227	0.00090 56499
Residuals	72	0.035095 61	0.00048 7439		
Sparse Occupancy Tests OPSO, OQSO, DNA 14b					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.021306 25	0.010653 13	11.54099	0.00004 491945
Residuals	72	0.06646 095	0.00092 307		
Sparse Occupancy Tests OPSO, OQSO, DNA 14c					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	0.07828 88	0.039144 42	17.90482	4.878616 e-007
Residuals	72	0.157410 0	0.002186 25		
The Squeeze Test					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	3.643777	1.821888	28.19157	9.071541 e-010
Residuals	72	4.653020	0.064625		
Sum					
Df	Sum of Sq	Mean	Sq	F Value	Pr(F)
B	2	9.86080 0e-032	4.930381 e-032	1	0.372930 5
Residuals	72	3.549874 e-030	4.930381 e-032		

Table 47. The performance of DX-120-s, s=1, 2, 3, 4 with start seed 12345 in test:

**Count the 1's in a Stream of Bytes**

	9a				9b			
	s=1	s=2	s=3	s=4	s=1	s=2	s=3	s=4
<i>B1</i>	0.240654	0.775300	0.563214	0.849029	0.549418	0.023393	0.696242	0.466561
<i>B2</i>	0.181057	0.438102	0.086097	0.189233	0.676074	0.215320	0.011646	0.547596
<i>B3</i>	0.259870	0.279112	0.127618	0.572542	0.371626	0.420763	0.744242	0.556802
<i>B4</i>	0.556092	0.072994	0.818239	0.377331	0.055529	0.562415	0.232782	0.534258
<i>B5</i>	0.148707	0.394940	0.164031	0.182913	0.453117	0.200519	0.884081	0.730654
<i>B6</i>	0.454650	0.490050	0.218851	0.592607	0.629149	0.284851	0.955212	0.617924
<i>B7</i>	0.973250	0.137122	0.959718	0.182664	0.814488	0.407590	0.820716	0.923317
<i>B8</i>	0.158560	0.068179	0.574582	0.777041	0.740843	0.077479	0.143201	0.691134
<i>B9</i>	0.319929	0.043480	0.947603	0.459412	0.946210	0.256187	0.493658	0.941203
<i>B10</i>	0.567371	0.661008	0.274240	0.835385	0.336159	0.709614	0.987050	0.436292
Count(<0.05)	0	1	0	0	0	1	1	0
Count(<0.01)	0	0	0	0	0	0	0	0
Count(<0.001)	0	0	0	0	0	0	0	0



**Table 48. The 234 p-values collected from various tests of Diehard performed on different RNGs with same initial seed=12345. Comparison same modulus  $2^{31}-1$  of DX-102-1 with  $B=820$  and 5 FISH LCGs.**

DX-102-1 with B=820																			
0.7080	0.0371	0.6251	0.2270	0.1243	0.8025	0.4384	0.0130	0.6314	0.1594	0.7438	0.6116	0.3776	0.1166	0.7879	0.3493	0.4317	0.3177	0.9981	0.8154
0.7850	0.0612	0.0564	0.4009	0.0979	0.1562	0.1419	0.8641	0.3808	0.7619	0.9277	0.3259	0.1989	0.7650	0.0456	0.1088	0.4818	0.2467	0.1176	0.4656
0.8424	0.6254	0.6079	0.8424	0.5093	0.9940	0.6135	0.2218	0.6603	0.7442	0.2900	0.9339	0.5767	0.6832	0.7569	0.1459	0.6330	0.9798	0.8875	0.9641
0.9962	0.2661	0.9563	0.9792	0.7826	0.7012	0.6214	0.7032	0.9512	0.8278	0.7642	0.2705	0.6225	0.5020	0.2712	0.5055	0.8407	0.1003	0.7571	0.8244
0.8774	0.9527	0.0246	0.2240	0.7914	0.3685	0.9964	0.2969	0.2393	0.7880	0.0640	0.6378	0.9296	0.3319	0.9659	0.9773	0.2365	0.1599	0.3012	0.4980
0.6545	0.7190	0.7559	0.3370	0.3467	1.0000	1.0000	0.1107	0.0109	0.6920	0.8955	0.9576	0.9080	0.2585	0.7123	0.3385	0.2517	0.8199	0.6244	0.2872
0.3671	0.2278	0.7448	0.2250	0.1689	0.1846	0.5591	0.5270	0.4534	0.1906	0.0259	0.4565	0.1912	0.1236	0.0348	0.6719	0.0837	0.9130	0.3882	0.5536
0.3744	0.6246	0.2147	0.0711	0.1605	0.5275	0.8598	0.9175	0.3249	0.7637	0.0330	0.6874	0.7501	0.3480	0.3442	0.6473	0.9772	0.5078	0.7379	0.4872
0.9822	0.7715	0.9689	0.9094	0.6082	0.3531	0.2341	0.7161	0.0543	0.4597	0.2704	0.3909	0.7322	0.4734	0.9878	0.4269	0.2981	0.3123	0.5535	0.3342
0.9990	0.8531	0.7529	0.5615	0.8931	0.8980	0.8569	0.8427	0.6142	0.1129	0.8847	0.3966	0.1358	0.3355	0.8724	0.1851	0.4177	0.5960	0.1851	0.9123
0.3479	0.6462	0.4702	0.1992	0.7231	0.4178	0.9148	0.0504	0.3015	0.8140	0.5208	0.3277	0.0868	0.2328	0.2319	0.4949	0.9973	0.7919	0.8609	0.1701
0.0218	0.5372	0.2248	0.7425	0.9359	0.3602	0.3150	0.3536	0.5255	0.6324	0.6479	0.8382	0.4562	0.8891						

FISH LCG with B=742938285																			
0.5049	0.5763	0.4548	0.6225	0.5801	0.6847	0.1204	0.9512	0.7298	0.3099	0.9099	0.8794	0.9998	0.7140	0.1271	0.6402	0.2675	0.8753	0.1241	0.0025
0.9179	0.2881	0.0028	0.4105	0.2880	0.4259	0.6591	0.2881	0.5733	0.4213	0.9358	0.3976	0.0360	0.9754	0.0000	0.0142	0.0006	0.0000	0.0000	0.0027
0.0088	0.0027	0.0005	0.0013	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	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	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	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	1.0000	1.0000	1.0000	1.0000
0.4428	1.0000	1.0000	0.7505	1.0000	1.0000	1.0000	0.6593	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0280	0.0280	0.0280	0.0280	0.0280	0.2753	0.2753	0.2753	0.1683	0.1701	0.2383
0.2383	0.2383	0.2383	0.2525	0.3032	0.1872	0.1872	0.1872	0.0280	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	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	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	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	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	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	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

FISH LCG with B=950706376																			
0.6157	0.1433	0.6748	0.6985	0.9254	0.6431	0.8813	0.8125	0.9826	0.8630	1.0000	1.0000	1.0000	1.0000	0.2240	0.6014	0.6204	0.0032	0.4918	0.2808
0.0497	0.5471	0.6168	0.6469	0.2146	0.6158	0.6206	0.5446	0.4578	0.6207	0.6206	0.1931	0.6212	0.2725	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	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	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	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	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	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	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	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
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	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	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	1.0000

FISH LCG with B=1226874159																				
0.0527	0.8631	0.2471	0.3842	0.0312	0.0201	0.2246	0.0280	0.4238	0.5189	0.4745	0.8771	0.6500	0.8266	0.9242	0.6362	0.5869	0.3201	0.6855	0.2687	
0.3028	0.1662	0.6105	0.7724	0.1681	0.2793	0.5232	0.5793	0.7903	0.2475	0.0077	0.4662	0.1683	0.4964	0.0001	0.0013	0.0000	0.0000	0.0001	0.0006	
0.0000	0.0001	0.0000	0.0001	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	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	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9995	0.9963	0.9999	0.9978	0.9942	1.0000	0.9986	0.3513	0.6702	0.9867	0.9979
0.1595	1.0000	0.9904	0.3546	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	1.0000	1.0000	1.0000	
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9932	1.0000	0.0279	0.1546	0.1041	0.0214	0.1703	0.0214	0.4974	0.0214	0.1181	0.0279	0.1546
0.0996	0.0214	0.0375	0.0214	0.1546	0.0279	0.1546	0.0996	0.0214	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	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	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	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	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	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	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	

FISH LCG with B=62089911																				
0.1525	0.5074	0.9617	0.0922	0.4868	0.2119	0.9012	0.0808	0.2884	0.1223	0.9108	0.9084	0.2960	0.9499	0.0385	0.3768	0.1408	0.5684	0.1384	0.0178	
0.6448	0.8830	0.6778	0.5135	0.0158	0.5122	0.7313	0.4538	0.4769	0.3015	0.3317	0.5349	0.1989	0.3563	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.3979	1.0000	0.9996	0.9691	0.9167	0.1960	0.9510	0.9658	1.0000	0.9857	0.9398
0.9993	0.8041	0.9999	0.9917	1.0000	1.0000	1.0000	0.7996	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1798	1.0000	0.1488	0.0991	0.1488	0.0753	0.1488							