

DNA quantities and relationships

The Shared cM Project – Version 3.0

For MUCH more information (including histograms and company breakdowns) see: goo.gl/Z1EcJQ

August 2017

Blaine T. Bettinger
www.TheGeneticGenealogist.com
CC 4.0 Attribution License

How to read this chart:

Aunt/Uncle	← Relationship
1750	← Average
1349 - 2175	← Range (low-high) (99% Percentile)



Half GG-Aunt/Uncle 187 12 - 383	Great-Grandparent 881 464 - 1486					Great-Great Aunt/Uncle 427 191 - 885	Other Relationships				
Half Great-Aunt/Uncle 432 125 - 765	Grandparent 1766 1156 - 2311				Great Aunt/Uncle 914 251 - 2108						
	Half Aunt/Uncle 891 500 - 1446	Parent 3487 3330 - 3720			Aunt/Uncle 1750 1349 - 2175						
Half 3c 61 0 - 178	Half 2c 117 9 - 397	Half 1C 457 137 - 856	Half-Sibling 1783 1317 - 2312	Sibling 2629 2209 - 3384	SELF	1C 874 553 - 1225	2c 233 46 - 515	3c 74 0 - 217	4c 35 0 - 127	5c 25 0 - 94	6C 21 0 - 86
Half 3c1R 42 0 - 165	Half 2c1R 73 0 - 341	Half 1C1R 226 57 - 530	Half Niece/Nephew 891 500 - 1446	Niece/Nephew 1750 1349 - 2175	Child 3487 3330 - 3720	1C1R 439 141 - 851	2c1R 123 0 - 316	3C1R 48 0 - 173	4C1R 28 0 - 117	5C1R 21 0 - 79	6C1R 16 0 - 72
Half 3c2R 34 0 - 96	Half 2c2R 61 0 - 353	Half 1C2R 145 37 - 360	Half Great Niece/Nephew 432 125 - 765	Great-Niece/Nephew 910 251 - 2108	Grandchild 1766 1156 - 2311	1C2R 229 43 - 531	2c2R 74 0 - 261	3C2R 35 0 - 116	4C2R 22 0 - 109	5C2R 17 0 - 43	6C2R 17 0 - 75
Half 3c3R	Half 2c3R	Half 1C3R 87 0 - 191	Half GG Niece/Nephew 187 12 - 383	Great-Great-Niece/Nephew 427 191 - 885	Great-Grandchild 881 464 - 1486	1C3R 123 0 - 283	2c3R 57 0 - 139	3C3R 22 0 - 69	4C3R 29 0 - 82	5C3R 11 0 - 44	7C 13 0 - 57
											7C1R 13 0 - 53
											8C 12 0 - 50

DNA Detectives Autosomal Statistics Chart

Created by Christa Stalcup

©THEDNADETECTIVES, 2016

cM (centiMorgans)^		Percentage (%) of Shared DNA^^		Group	Relationship	Notes
Average	Range	Average	Range			
3,600		50%			Parent - Child	
2650	2300 - 3900	37%	32%-54%	Group A	Full Sibling	Ancestry, FTDNA and GEDmatch (HIR only)
3600		50%				23andMe (FIR included)
1800	1300 – 2300	25%	18%-32%	Group B	Half Sibling Aunt/Uncle/Niece/Nephew Double First Cousin Grandparent/Grandchild	3/4 Siblings^^^
900	575 - 1330	12.5%	8%-18.5%	Group C	First Cousin (1C) Half Aunt/Uncle/Niece/Nephew Great-Grandparent/Great-Grandchild Great-Aunt/Uncle/Niece/Nephew	
450	215 - 650	6.25%	3%-9%	Group D	First Cousin Once Removed (1C1R) Half First Cousin (½ 1C) Half Great-Aunt/Uncle/Niece/Nephew	
224	75 - 360	3.125%	1%-5%	Group E	Second Cousin (2C) First Cousin Twice Removed (1C2R) Half First Cousin Once Removed (½1C1R)	
112	30 - 215	1.56%	0.42% - 3%	Group F	Second Cousin Once Removed (2C1R) Half Second Cousin (½ 2C) First Cousin Three Times Removed (1C3R) Half First Cousin Twice Removed (½ 1C2R)	
56	0 - 109*	0.78%	0% - 1.52%	Group G	Third Cousin (3C) Second Cousin Twice Removed (2C2R)	~10% of 3Cs will not share DNA*
30	0 - 75**	0.4%	0%-1%	Group H	Third Cousin Once Removed (3C1R) Other Distant Cousins	~50% of 4Cs will not share DNA**

^cM =Ancestry.com & FTDNA

^^Percentage of DNA = 23AndMe

^^^ 3/4 Siblings are a combination of half siblings and 1st cousins, FIRs are included.

Groups A & B: 99% within the ranges given

Groups C – I: 95% within the ranges given