

Structure of the Sedenion Series Corrections

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1 Zero Divisor Corrections

The Structure of the Sedenion Series article has over estimated the number of zero divisors. It incorrectly calculates 1428 zero divisors for level five when the correct number is 1260. Table 7 repeats entries in previous tables. For example the first entry in Table 7, provides the zero divisor $(o_{123} + o_{14})(o_{25} + o_{345})$ while the last entry in Table 6 for the first cycle is $(o_{14} + o_{123})(o_{25} + o_{345})$. This means that Table 7 should be removed leaving 1260 zero divisors for level five. Table 8 also needs corrections for the zero divisors, factor columns and the c-associatives cardinality is listed instead of normal associativity to exclude quaternion-like products where a is a scalar.

Table 1: Sedenion Series Cardinality

Label	Pure Basis Size	Triads	C-Associatives	Zero Divisors	Factor
\mathbb{O}	7	35	0	0	0
$\tilde{\mathbb{O}}$	7	35	0	24	–
$\mathbb{S} = \mathbb{S}_4$	15	455	84	84	1
\mathbb{S}_5	31	4,495	1,428	1,260	15
\mathbb{S}_6	63	39,711	15,876	13,020	155
\mathbb{S}_7	127	333,375	148,932	117,180	1,395
\mathbb{S}_8	255	2,731,135	1,289,988	992,124	11,811
\mathbb{S}_9	513	22,108,415	10,740,996	8,161,020	97,155
\mathbb{S}_{10}	1023	177,910,271	87,676,932	66,194,940	788,035