

## Ultimate Mathematics Generates Six Suras and their Number of Verses

Here again are awesome mathematical relations based on the Ultimate Mathematics of Primes, Composites, their respective indices, group structures and number base systems producing and proving the Quran as the Book of God. To prove this we start with the 19<sup>th</sup> Mersenne Prime (MP). MPs are of the following form;

$$MP = 2^p - 1.$$

The exponent  $p$  is a prime number. Note that  $p$  is not just any prime number; only specific primes yield MPs. For a more detailed description of MPs please log on to this website <http://primes.utm.edu/mersenne/index.html>. After a quick web search, we find that the exponent for the 19<sup>th</sup> MP is **4253**. The MP itself is huge number having 1281 digits.

Now let us look at the permutation group properties of the four digits 2, 3, 4, and 5.

Index	Group Element	Index	Group Element
1	2345	13	4235
2	2354	14	4253
3	2435	15	4325
4	2453	16	4352
5	2534	17	4523
6	2543	18	4532
7	3245	19	5234
8	3254	20	5243
9	3425	21	5324
10	3452	22	5342
11	3524	23	5423
12	3542	24	5432

The group element **19** is **5234** and it is a composite with an index of **4537**. The group element **22** is **5342** and it is a composite with an index of **4635**. Note, we started with 4253 as the exponent of the 19<sup>th</sup> MP. The index of prime number 19 is 8. If we assume that 4253 is in base 8 then written in base 10 it will be **2219**. That is why group elements 19 and 22 are important to look at. We knew about these from the following reference (JOS Volume 6 No. 6, February-March 1999)

<http://www.barry-baker.com/JournalOfSubmission/vol%206%20no%2006.htm>.

Now let us look at the 9<sup>th</sup> group element, 3425; we find it is the index of composite **3975**. Finally, we take a look at the 20<sup>th</sup> group element, 5243, we find that it is the index of composite **6123**.

The above table has just generated the chapter or sura numbers and their associated number of verses for four suras in the Quran. **4253** telling us 42 has **53** verses, **4537** is telling us 45 has **37** verses, **4635** tells us that 46 has **35** verses and **3975** tells us that 39 has **75** verses.

The 20<sup>th</sup> group element 5243 is the index of 6123 and in the Quran the number of verses from 1:1 to 96:19 is exactly 6123. Also note that 6123 is the 19<sup>th</sup> group element in the permutation of the 4 digits 1, 2, 3, and 6. The following table shows all the 24 permutation group elements of the above four digits.

Index	Group Element	Index	Group Element
1	1236	13	3126
2	1263	14	3162
3	1326	15	3216
<b>4</b>	<b>1362</b>	16	3261
5	1623	17	3612
6	1632	18	3621
7	2136	<b>19</b>	<b>6123</b>
8	2163	20	6132
9	2316	21	6213
10	2361	22	6231
11	2613	23	6312
12	2631	24	6321

Now let us see if we can generate 96 having 19 verses from the above two tables. First, we note that the index of composite 1362 is 1143 and  $1143 = 9 \times 127$ . We note that chapter 9 has 127 verses. But also the number of verses in the Quran from 1:1 to 9:127 is exactly 1362. Going back to the 19<sup>th</sup> group elements in the two above tables, we have 6123 and 5234. The difference between these two numbers is;

$$6123 - 5234 = 889$$

Writing 889 is base 9 we have 1187. We find the 1187<sup>th</sup> prime number is **9619**. This is telling us that sura **96** has **19** verses. Also, 1187 is a lonely prime and its index is 114, the number of suras in the Quran.

Praise God, Lord of the Multiverse.