TOWARDS EXPLORING MATHEMATICAL FACTS OF SURAH AL-KAWTHAR, THE SMALLEST CHAPTER OF THE HOLY QUR'AN

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ABSTRACT

In this study an attempt for understanding a few mathematical facts of a Qur'anic Chapter (i.e. *sūrah*) is made. The attempt is the combination of both Abjad and Non-abjad approach. For the purpose of this paper, the 108th *sūrah* of the holy Qur'an- *sūrah* Al-Kawthar is selected. This is the shortest of the 114 *sūrah*s of the Qur'an. The main aim is to see whether there is any mathematical patterns in the *sūrah* that reveals uniqueness of the holy book. A possible analysis is done based on very simple and common mathematical operations such as 'addition', 'subtraction', 'multiplication', and 'division'. Some astonishing outcomes have been discovered which indicates not only the singularity of the *sūrah* but also proves the impossibility of any human intervention in the Qur'an. These amazing conclusions are derived by human efforts, which are not conclusive, and the Qur'an al-Karim is not in need of such discoveries to prove that it is a divine sacred text. The main purpose of the Qur'an is to guide all mankind towards a blessed and blissful life in this worldly life and also eternal life in hereafter.

Key words: Surah Kawthar, Addition, Subtraction, Multiplication, Division.

1. INTRODUCTION

The Qur'an is the primary source of guidance in Islam. Allah, the Almighty, has gradually revealed the Qur'an, to the last Prophet (May peace be upon him) in 23 years. Allah also took it upon Himself to safeguard this Book as we see in *sūrah al*-Hijr of the Qur'an, which reads: "Indeed, it is We Who sent down the Qur'an and indeed, We will be its guardian."[1] This is true both in the perspective of the book in its totality as well as any part of it. In several instances Allah SWT also challenged the Arabs and all humanity at all time to create a book like this.[2] From the beginning the Qur'an was considered as a source of knowledge and research. This was because the uniqueness and truthfulness of al-Qur'an was confirmed by all branches of knowledge such as history, astronomy, medicine, physics, chemistry, law, sociology, and many more. Taslaman has outlayed a few examples in his book and suggested that Mathematics have

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[1] Al-Qur'an, al-Hijr: 15:9.

[2] See Al-Qur'an, al-Isra': 17:88.

been employed by researchers analyzing the Qur'an.[3] 'The theory of 19' by Rashid Khalifa was probably the first established contribution.[4] Apart from his personal attitude, his research initiated further analysis. As time passed, with the advancement of modern computing facility his research was pursued by other scholars. As a result, there were new discoveries such as the miraculous existence of the number '7', golden ratio, symmetry, primes, stylistic and mathematical miracles, etc in the Qur'an continue to astonish Muslim scholars as well as the world. The objective is to prove that it is impossible for other than Allah to 'devise' the Qur'an.[5] In other words, the text of the Qur'an is organized into 114 chapters through divine order and arrangement.[6]

In the current study, the interest is focused on the smallest chapter of the Qur'an, Sūrah- al-Kawthar. A sample of the *sūrah* is presented in **Figure 1** copied directly from the Uthmānī script of the Qur'an.[7]

2. METHODOLOGY

Both *abjad* and *non-abjad* based calculations in the form of addition, subtraction, multiplication, division, etc was made in this research paper in pursuit to discover any kind of patterns. Many researchers have used *abjad* based calculations in their research and it proved to be the most suitable.[8] In **Table 1**, the *abjad* values of the 28 alphabets of the Arabic language is presented. These values are used in the mathematical calculations related to Sūrah al-Kawthar in the later sections. Also *non-abjad* based calculation is also presented.

Table 1: Abjad (Gematrical) values of the 28 alphabets of the Arabic language

[3] Caner Taslaman, *The Quran Unchallengeable Miracle*, Nettleberry / Çitlembik Publications, ISBN: 975-6663-94-4, 2006

[4] Rashad Khalifa, *Miracle Of The Quran: Significance of the Mysterious Alphabets*, Islamic Productions, St. Louis, Missouri. See also Rashad Khalifa, *The Computer Speaks: God's Message to the World*. Renaissance Productions International..

[5]Dr. Al-Kaheel. Ishraqat al-Raqam Sab`a fial-Qur'an al-Karim. Dubai: Dubai International Holy Quran Award. Available online at www.kaheel7.com; see also, Al-Kaheel, Secrets of Quran Miracle_ some basic guidelines to numeric miracle. Available online at www.kaheel7.com; and http://www.heliwave.com (accessed June 2022).

[6] A. R.Yauri, R. A. Kadir, A. Azman, , & M. A. A. Murad, Quranic-based concepts: Verse relations extraction using Manchester OWL syntax. In Information Retrieval & Knowledge Management (CAMP), International Conference on Information Retrieval & Knowledge Management. See also, H. Almujalli, The Relationship between the Prophet Muhammad and the Quran. Journal of Islamic Studies, 2(4), 01-05; B. H. Aboul-Enein, Health-promoting verses as mentioned in the Holy Quran. Journal of religion and health, 55(3), 821-829.

[7] https://imnasution.files.wordpress.com/2013/08/mushaf-madinah.pdf, (Last visited at June 2022)

[8] K. M. Al-Faqih, A mathematical phenomenon in the Quran of earth-shattering proportions: A Quranic theory based on gematria determining Quran primary statistics (words, verses, chapters) and revealing its fascinating connection with the golden ratio. Journal of Arts and Humanities, 6(6), 52-73; See also, D. Esad and K. Lutvo, Qur'an Stylistic And Mathematical Miracle, ISBN 978-9958-625-44-2.

ḥarf	Gematrical values	*ḥarf*	Gematrical values	*ḥarf*	Gematrical values
ا	1	ك	20	ر	200
ب	2	ل	30	ش	300
ج	3	م	40	ت	400
د	4	ن	50	ث	500
ه	5	س	60	خ	600
و	6	ع	70	ذ	700
ز	7	ف	80	ض	800
ح	8	ص	90	ظ	900
ط	9	ق	100	غ	1000
ي	10	--	--	--	--

3. RESULTS AND DISCUSSIONS

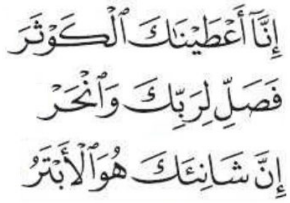


Figure 1: Sūrah Al-Kawthar, copied from the holy Qur'an

Table 2: Abjad numbering of 1st ayat

Arabic alphabet	Numeric value
ا	1
ن	50
ا	1
ا	1
ع	70
ط	9
ي	10
ن	50
ك	20
ا	1
ل	30
ك	20
و	6
ث	500
ر	200
Total	969

Table 3: Abjad numbering of 2nd ayat

Arabic alphabet	Numeric value
ف	80
ص	90
ل	30
ل	30
ر	200
ب	2
ك	20
و	6
ا	1
ن	50
ح	8
ر	200
Total	717

Table 4: Abjad numbering of 3rd ayat

Arabic alphabet	Numeric value
ا	1
ن	50
ش	300
ا	1
ن	50
ء	1
ك	20
ه	5
و	6
ا	1
ل	30
ا	1
ب	2
ت	400
ر	200
Total	1068

Note:

I. In *abjad* value, both "alif" and "hamza" have the same value of 1.[9] The Arabic alphabet comprises 29 letters. However, in the Abecedarian alphabet there are 28 because there is no difference between Hamza and Alif.[10]

II. In the calculation of Table 2, 3 and 4 all the *harf*s (i.e. ن in 1st Ayat, ل and ب in 2nd Ayat, ن in 3rd Ayat) having *Shaddah (i.e. tashdid) are* considered one *harf*, as per appearance (please see related calculation in the Point- 30).

Sūrah Kawthar has three (03) verses. In Table 1 the alphabets (i.e Arabic *ḥarf*) and the *abjad* values of verse 1 is presented one by one. The same is done in Table 2 and 3 for the second and third verses. In the following section some patterns are presented:

1) *Digit sum (DS):* The digit sum (DS) of the verses are 969, 717 and 1068. All of them are divisible by 3.
2) *Similarity in DS of DS:* The DS of the DS of all the three verses are found to be the same, as shown in **Figure 2**.
    - 969→9+6+9→24→2+4=6 (also divisible by 3)
    - 717→7+1+7→15→1+5=6 (also divisible by 3)
    - 1068→1+0+6+8→15=6 (also divisible by 3)

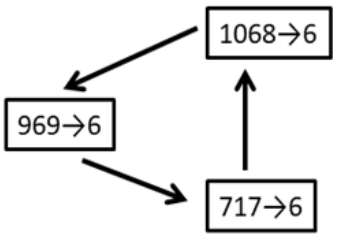


Figure 2: Similarity in summation of DS

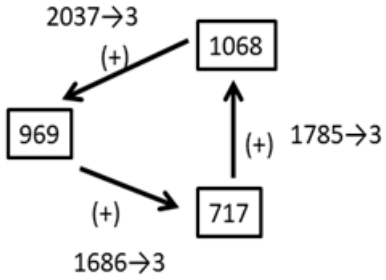


Figure 3: Similarity in the sum of the corresponding DS

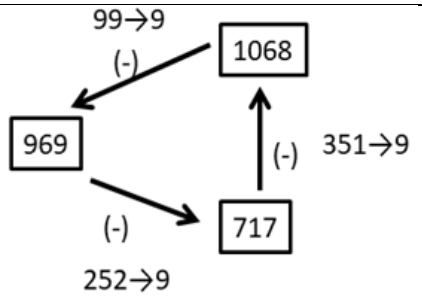


Figure 4: Similarity in the subtraction of the corresponding DS

3) *Similarity in the sum of the corresponding DS:* The summation of DS of the first two verses is 1686. The DS of 1686 is 3. Interestingly the DS of the rest two cases are also 3, as shown in **Figure 3**.

[9] https://charactercalculator.com/abjad-calculator, Last accessed at 08/10/22
[10] https://www.answering-christianity.com/fakir60/gematria.htm, Last accessed at 08/10/22.

- 969+717=1686→1+6+8+6→21→2+1=3
- 1686 = 2 × 3 × 281
- 717+1068=1785→1+7+8+5→21→2+1=3
- 1785 = 3 × 5 × 7 × 17
- 1068+969=2037→2+0+3+7→12→1+2=3
- 2037 = 3 × 7 × 97

4) *Similarity in the subtraction of the corresponding DS:* The difference of the first two corresponding verses is 969-717=252. The DS of 252 is 9. Similar outcome is also applicable for the reset two cases, as shown in **Figure 4**.
    - 969-717=252→2+5+2=9 (divisible by 3)
    - 717-1068=|351|→3+5+1=9 (divisible by 3)
    - 1068-969=99→9+9=18→1+8=9 (divisible by 3)
    - 252 = 2 × 2 × 3 × 3 × 7
    - 351 = 3 × 3 × 3 × 13
    - 99 = 3 × 3 × 11

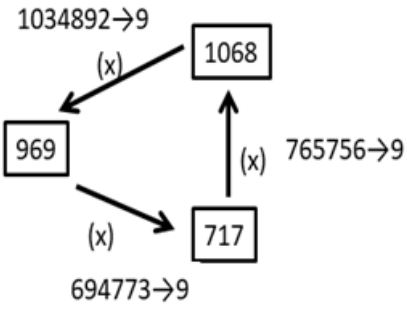


Figure 5: Similarity in the subtraction of the corresponding DS

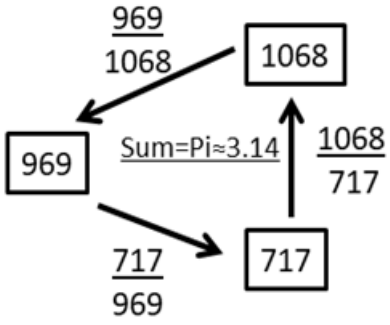


Figure 6: Sum of division is π

5) *Similarity in DS of multiplication:* The number 694773 is got from the multiplication of the DSs 969 and 717. The Ds of 694773 is 9. The other two values 765756 and 1034892 have also the same output, as shown in **Figure 5**.
    - 969×717=694773→6+9+4+7+7+3=36→3+6=9 (divisible by 3)
    - 694773 = 3 × 3 × 17 × 19 × 239
    - 717×1068=765756→7+6+5+7+5+6=36→3+6=9 (divisible by 3)
    - 765756 = 2 × 2 × 3 × 3 × 89 × 239
    - 1068×969=1043892→1+0+3+4+8+9+2=27→2+7=9 (divisible by 3)
    - 1043892 = 2 × 2 × 3 × 3 × 107 × 271
6) *Existence of π in sum of division:* From the sum of the division of the DSs of the *sūrah al* Kawthar is almost equal to π, as shown in **Figure 6**.

- $\frac{717}{969} + \frac{1068}{717} + \frac{969}{1068} = 3.13678 \cong 3.14\ (i.e.\pi)$

7) *Similarity in sum and multiplication of DS:* Interestingly the end product of the sum and multiplication of DS is 9 as shown below.
   - 969+717+1068=2754→2+7+5+4=18→1+8=9 (divisible by 3)
   - 2754 = 2 × 3 × 3 × 3 × 3 × 17
   - 969x717x1068=742017564→7+4+2+0+1+7+5+6+4=36→3+6=9 (divisible by 3)
   - 742017564 = 2 × 2 × 3 × 3 × 3 × 17 × 19 × 89 × 239

8) *Alphabetic (i.e. Harf-wise) arrangement:* From **Table 1**, after placing the *Abjad* values one by one a number 150117091050201302065002 00 is got. Similarly, 8090303020022061508200 and 150300150120561301240020 0 are also got from **Table 2 and 3**. Finally putting all values in serial a big number can be obtained which is 150117091050201302065002 00*8090303020022061508200*150300150120561301240020 0. Putting the no of *surah* and ayat number in-front, and reversing as well, of this big no. another two big numbers are obtained. Amazingly, it is observed that all of these numbers are divisible by 200 (=2×2×2×5×5) and as well as by 3, as shown below.
   - 150117091050201302065002 00 = 2×2×2×3×5×5×269×1531×2371×448741×57098423
   - 8090303020022061508200 = 2×2×2×3×5×5×379×2027×17551756259759
   - 150300150120561301240020 0 = 2×2×2×3×5×5×1065643×2350695778989169
   - 150117091050201302065002 00809030302002206150820015030015012056130124002 00 = 2×2×2×3×3×5×5×67×1259×10524849499×536555272091×913874581582809353081×1915755774532083473497
   - From 1st-3rd Ayat with no of *surah* and ayat no: 108315011709105020130206500200809030302002206150820015030015012056130124 00200 = 2 × 2 × 2 × 3 × 5 × 5 × 7 × 157 × 471618396385769009017106125973613903137950577 × 348296388243259294511657 29
   - From 1st-3rd Ayat with ayat no and no of *sūrah*: 310815011709105020130206500200809030302002206150820015030015012056130124 00200 = 2 × 2 × 2 × 3 × 5 × 5 × 233 × 911 × 244048665813248203196197249167941838114353581917102851203471646068109

Table 5: *Abjad* based Analysis on lateral arrangement

Ayat	Numerical	Divisible	Comm	Numeric	Divisible	Commen

1st	2nd	3rd	value	number	ent	al value (reverse order)	number	t
1	80	1	1801		prime	1801		prime
50	90	50	509050	2×5×5×10181		509050	2×5×5×10181	
1	30	300	130300	2×2×5×5×1303		300301		prime
1	30	1	1301		prime	1301		prime
70	200	50	7020050	2×5×5×140401		5020070	2×5×11×47×971	
9	2	1	921	3×307	Divisible by 3	129	3×43	Divisible by 3
10	20	20	102020	2×2×5×5101		202010	2×5×20201	
50	6	5	5065	5×1013		5650	2×5×5×113	
20	1	6	2016	2×2×2×2×2×3×3×7	Divisible by 3	6120	2×2×2×3×3×5×17	Divisible by 3
1	50	1	1501	19×79		1501	19×79	
30	8	30	30830	2×5×3083		30830	2×5×3083	
20	200	1	202001		prime	120020	2×2×5×17×353	
6		2	62	2×31		26	2×13	
500		400	500400	2×2×2×2×3×3×5×5×139	Divisible by 3	400500	2×2×3×3×5×5×5×89	Divisible by 3
200		200	200200	2×2×2×5×5×7×11×13		200200	2×2×2×5×5×7×11×13	
Total			8707518	2×3×3×483751	Divisible by 3	6799509	3×3×31×24371	Divisible by 3

9) *Abjad based lateral arrangement:* In Table 5 analysis (*abjad* based) is done based on lateral arrangement-

- There are 3 prime numbers in both ordered (1801, 1301 and 202001) and reverse ordered pattern (1801, 300301 and 1301).
- Also, there are 3 numbers divisible by 3 in both ordered (921, 2016 and 500400) and reverse ordered pattern (129, 6120 and 400500).
- The remaining number is 9 (non-prime+ non divisible by 3) in both ordered and reverse ordered pattern. Therefore a stunning symmetry exists in both the patterns.
- The number 339 (extracted from above three points) is also divisible by 3.

10) *Ordered and reverse-ordered arrangement (Abjad based):* In Table 5, the sum of ordered arrangement is 8707518. The sum of reverse-ordered arrangement is 6799509. Both are divisible to 3. Also the digit sum of both the numbers is 9 (divisible to 3).
    - 8707518→8+7+0+7+5+1+8=36→3+6=9
    - 6799509→6+7+9+9+5+0+9=45→4+5=9

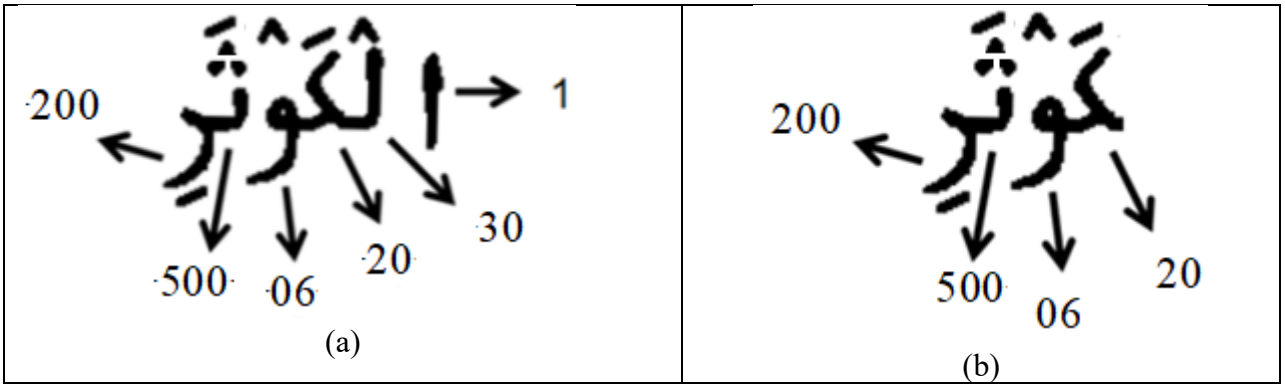


Fig 7: Abjad values of a words *'al-Kawthar'and 'Kawthar'*

11) *Regarding the word 'al-Kawthar' (Abjad based)*: In Fig 7 (a), Digit sum is 1+30+20+06+500+200=757 (a prime number). Also 757→7+5+7=19 (also a prime).
12) *Regarding the word 'Kawthar' (Abjad based)*: In Fig 7 (b), Digit sum is 20+06+500+200=726→7+2+6=15 (divisible by 3). Also 726 = 2 × 3 × 11 × 11 (divisible by 3).
13) *Alphabetic (i.e. Harf-wise) positioning (Abjad based)*: From Fig 7 (b), 206500200 = 2 × 2 × 2 × 3 × 5 × 5 × 344167 (divisible by 3). In reverse order, 200500620 = 2 × 2 × 3 × 5 × 3341677 (divisible by 3).
14) *Sūrah –based arrangement: Sūrah* Kawthar is the 108th *Sūrah* of the holy Qur'an, which has 114 surah. This means 107 *sūrah*s are before it (*Sūrah* Fatiha to *Sūrah* Ma`un), and another 6 *sūrahs* (*Sūrah* Kafirun to *Sūrah* Nus) are after this surah. That means 107+1 (i.e. *Sūrah* Kawthar) + 6, which can be written as 10716. In reverse order 61107. Both of these numbers are divisible to 3. Sum of the numbers 1 to 107 is 5778 and sum of the numbers from 109 to 114 is 669. Both the numbers (i.e 5778 and 669) are divisible to 3. That means even the position of *Sūrah* Kawthar is selected with utmost mathematical precision.
    - 10716 = 2 × 2 × 3 × 19 × 47 (divisible to 3)
    - 61107 = 3 × 20369 (divisible to 3)
15) *Sūrah based positioning:* As mentioned earlier, *Sūrah* Kawthar is the 108th *Sūrah* of the holy Qur'an, which has 114 *sūrah*. Sum of the numbers 1 to 107 is 5778 and sum of the numbers from 10 to 114 is 669. Both the numbers (i.e 5778 and 669) are divisible to 3. Therefore, the

position of *Sūrah* Kawthar based on surah numbers, is selected with utmost mathematical precision.

- Sum from 1 to 107=1+2+3+…..+107=5778, (divisible to 3).
- The no 108 is divisible to 3.
- Sum from 109 to 114=109+110+…..+114=669, (divisible to 3).

16) *Ayat–based positioning:* Counting from the beginning of the holy Qur'an, *Sūrah* Kawthar has the ayat 6205, 6206 and 6207 (i.e. total 3 ayats). Before this *sūrah* there are 6204 *ayat*. And after this *sūrah* there are *ayat* starting from 6208 to 6236. Some related calculations are shown below. From this it can be also concluded that, the position of *Sūrah* Kawthar based on ayat numbers, is selected with utmost mathematical precision.

- Sum from 1 to 6204=1+2+3+…..+6205=19247910, (divisible to 3).
- Sum from 6205 to 6207=6205+6206+6207=18618, (divisible to 3).
- Sum from 6208 to 6236=6208+6209+…..+6236= $\frac{6236(6236+1)}{2} - \frac{6207(6207+1)}{2}$ =180438, (divisible to 3).

إِنَّآ أَعۡطَيۡنَٰكَ ٱلۡكَوۡثَرَ
فَصَلِّ لِرَبِّكَ وَٱنۡحَرۡ
إِنَّ شَانِئَكَ هُوَ ٱلۡأَبۡتَرُ

Figure 1: Sūrah Al-Kawthar, copied from the holy Qur'an

Table 6: Abjad numbering of 1st ayat

Arabic alphabet	Numeric value
ا	1
ن	50
~~ا~~	~~1~~
ا	1
ع	70
ط	9
ي	10
ن	50
ك	20
~~ا~~	~~1~~
ل	30
ك	20
و	6
ث	500
ر	200
Total	967

Table 7: Abjad numbering of 2nd ayat

Arabic alphabet	Numeric value
ف	80
ص	90
ل	30
ل	30
ر	200
ب	2
ك	20
و	6
~~ا~~	~~1~~
ن	50
ح	8
ر	200
Total	716

Table 8: Abjad numbering of 3rd ayat

Arabic alphabet	Numeric value
ا	1
ن	50
ش	300
~~ا~~	~~1~~
ن	50
ء	1
ك	20
ه	5
و	6
~~ا~~	~~1~~
ل	30
ا	1
ب	2
ت	400
ر	200
Total	1066

17) *Existence of few Primes:* Now let us view *Sūrah* Kawthar as it is recited. If we extract the alphabets of *Sūrah* Kawthar as it is recited here are the alphabets we get Table 7, 8 and 9. The following conclusion can be extracted.

- 1st ayat (Table 6)-13 alphabet, 13 is a prime no.
- 2nd ayat (Table 7)-11 alphabet, 11 is a prime no.
- 3rd ayat (Table 8)-13 alphabet, 13 is a prime no.
- Adding them: 13+11+13=37 is prime no.
- Arranging them: 131113 is prime no.
- 967+716+1066=2749 is prime no.

18) *A Stunning inherent similarity:* From Table 6, after placing the *abjad* values one by one a number 150170910502030206500200 is got. Similarly 809030302002206508200 and 150300501205630124002000 are also got from Table 7 and 8. Finally putting all values in serial a big number can be got which is 150170910502030206500200*809030302002206508200*150300501205630124002000. Out of surprise is seen that all of them are divisible by 200 (=2 × 2 × 2 × 5 × 5), as shown below, which also is stunning inherent similarity.

- 150170910502030206500200 = 2 × 2 × 2 × 5 × 5 × 257 × 2921613044786579893
- 809030302002206508200 = 2 × 2 × 2 × 5 × 5 × 19 × 206281 × 1032100440919
- 150300501205630124002000 = 2 × 2 × 2 × 5 × 5 × 1487 × 7929773 × 6373217051
- 150170910502030206500200*809030302002206508200*150300501205630124002000= 2 × 2 × 2 × 5 × 5 × 6311 × 6469 × 44160517 × 167903735201 × 248042431629717695879952353956052542367

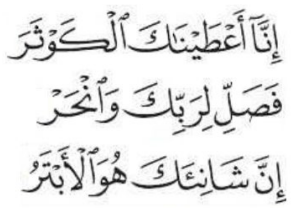


Figure 1: Sūrah Al-Kawthar, copied from the holy Qur'an

Table 9: Abjad numbering of 1st ayat

Arabic alphabet	Numeric value
ا	1
ن	50
ع	70
ط	9
ي	10
ك	20
ل	30
و	6
ث	500
ر	200

Table 10: Abjad numbering of 2nd t ayat

Arabic alphabet	Numeric value
ف	80
ص	90
ب	2
ح	8

Table 11: Abjad numbering of 3rd ayat

Arabic alphabet	Numeric value
ش	300
ه	5
ت	400

19) *Used alphabets (considering the sūrah as a whole):* This calculation is made considering the *sūrah* as a whole. Used alphabets at the 1st ayah is 10 (Table 9), used alphabets at the 2nd

ayah is 4 (Table 10) and used alphabets at the 3rd ayah is 3 (Table 11). The total 10+4+3=17, which is a Prime number.

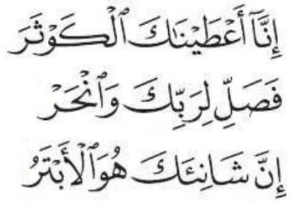


Figure 1: Sūrah Al-Kawthar, copied from the holy Qur'an

Table 12: *Abjad* numbering of 1st ayat

Arabic alphabet	Numeric value
ا	1
ن	50
ع	70
ط	9
ي	10
ك	20
ل	30
و	6
ث	500
ر	200

Table 13: *Abjad* numbering of 2nd t ayat

Arabic alphabet	Numeric value
ف	80
ص	90
ل	30
ر	200
ب	2
ك	20
و	6
ا	1
ن	50
ح	8

Table 14: *Abjad* numbering of 3rd ayat

Arabic alphabet	Numeric value
ا	1
ن	50
ش	300
ك	20
ه	5
و	6
ل	30
ب	2
ت	400
ر	200

20) *Used alphabets (considering each ayat separately):* This calculation is made considering each ayah separately. Used alphabets at the 1st ayah is 10 (Table 12), used alphabets at the 2nd ayah is 10 (Table 13) and used alphabets at the 3rd ayah is also 10 (Table 14). The total 10+10+10=30, which divisible by 3. From Table 12, 13 and 14 arranging the numerical values one after another a big number can be obtained which is also divisible by 3, as shown below.

- 150709102030650020080***9030***200220***6***1508150**300**205**630**2400200= 2 × 2 × 2 × 3 × 5 × 5 × 7 × 1296791746298218528325499254605 31 × 2767068778278238351

Table 15: Alphabetical frequency and related analysis (*abjad* based)

Alphabet		Serial No as per appearance	1st Ayat	2nd Ayat	3rd Ayat	Digit Sum	Linear digit
1)	ا	1	4	1	5	10	415
2)	ن	2	2	1	2	5	212
3)	ع	3	1	0	0	1	100
4)	ط	4	1	0	0	1	100
5)	ي	5	1	0	0	1	100
6)	ك	6	2	1	1	4	211

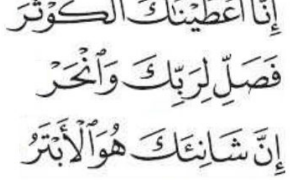


Figure 1: *Sūrah* Al-Kawthar, copied from

7)	ل	7	1	2	1	4	121	the holy Qur'an
8)	و	8	1	1	1	3	111	
9)	ث	9	1	0	0	1	100	
10)	ر	10	1	2	1	4	121	
11)	ف	11	0	1	0	1	010	
12)	ص	12	0	1	0	1	010	
13)	ب	13	0	1	1	2	011	
14)	ح	14	0	1	0	1	010	
15)	ش	15	0	0	1	1	001	
16)	ه	16	0	0	1	1	001	
17)	ت	17	0	0	1	1	001	
Sum		153	15	12	15	42	1635	

21) *Alphabetical frequency and related analysis (abjad based):* In Table 15 alphabetical frequency and related analysis is presented. For example, Alif (ا) is seen 4, 1 and 5 time in the 1st, 2nd and 3rd ayat respectively of the *Sūrah* Kawthar. The digit sum is 4+1+5=10. Also 4, 1 and 5 make the number 415. The same process is followed for the other alphabets. From Table 15, few big numbers are carefully generated and they are- 153, 1635, 123456789101112131415161 7, 42111211110000000, 11000121021111000, 52000111010100111 and 4152121001001002111211111001210100100110100010010 01. It found that all of them are divisible by 3. [Please be noted that this is *abjad* based analysis where both "alif" and "hamza" have the same value of 1]

- 1635 = 3 × 5 × 109
- 1+2+3+….+17=153 =3 × 3 × 17
- 123456789101112131415161 7 = 3 × 3 × 47 × 4993 × 584538396786764503
- 42111211110000000 = 2 × 2 × 2 × 2 × 2 × 2 × 2 × 3 × 5 × 5 × 5 × 5 × 5 × 5 × 5 × 41 × 293 × 116849
- 11000121021111000 = 2 × 2 × 2 × 3 × 5 × 5 × 5 × 3666707007037
- 52000111010010111 = 3 × 13 × 19 × 47 × 181 × 128879 × 64007
- 105111443141121111 = 3 × 479 × 732889 × 99805627
- 4152121001001002111211111001210100100110100010010 01=3 × 36187 × 382468934608284937612136126344644955380855004 1

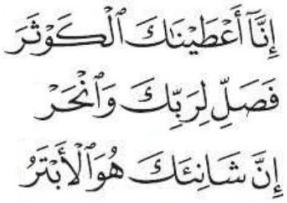


Figure 1: Sūrah Al-Kawthar, copied from the holy Qur'an

Table 16: Non-*abjad* numbering of 1st ayat

Arabic alphabet	Numeric value
ا	1
ن	2
ا	1
ا	1
ع	3
ط	4
ي	5
ن	2
ك	6
ا	1
ل	7
ك	6
و	8
ث	9
ر	10
Total	66

Table 17: Non-*abjad* numbering of 2nd ayat

Arabic alphabet	Numeric value
ف	11
ص	12
ل	7
ل	7
ر	10
ب	13
ك	6
و	8
ا	1
ن	2
ح	14
ر	10
Total	101

Table 18: Non-*abjad* numbering of 3rd ayat

Arabic alphabet	Numeric value
ا	1
ن	2
ش	15
ا	1
ن	2
ء	16
ك	6
ه	17
و	8
ا	1
ل	7
ا	1
ب	13
ت	18
ر	10
Total	118

Note:

I. In *abjad* value, both "alif" and "hamza" have the same value of 1.[11] The Arabic alphabet comprises 29 letters. However, in the Abecedarian alphabet there are 28 because there is no difference between Hamza and Alif.[12]

II. In the calculation of Table 16, 17 and 18 all the *harf*s (*i.e.* **ن** in 1st Ayat, **ل** and **ب** in 2nd Ayat, **ن** in 3rd Ayat) having *Shaddah (i.e. tashdid)* are considered one *harf*, as per appearance (please see related calculation in the Point- 30).

22) *Numbering all alphabets as per the first appearance (non-abjad approach):* The following calculation is done based on non-*abjad* approach. Numbering all alphabets as per the first appearance we can get Table 16, 17 and 18 for the 1st, 2nd and 3rd ayat respectively. It is seen that all the numbers are divisible to 3. It also means that all the alphabets are perfectly oriented, aligned and placed.

[11] https://charactercalculator.com/abjad-calculator, Last accessed at 08/10/22

[12] https://www.answering-christianity.com/fakir60/gematria.htm, Last accessed at 08/10/22.

- From 1st-3rd Ayat: 121134526176891*0111277101368121410*12151216617817113181 0= 2 × 3 × 5 × 40378175392297003709236712270713670717072205939037727
- From 1st-3rd Ayat with no of *sūrah* and ayat no: 10831211345261768910*111277101368121410*12151216617817113181 0 = 2 × 3 × 3 × 5 × 120346792725130765667903078904090237890239024068646345909
- From 1st-3rd Ayat with ayat no and no of *sūrah*: 31081211345261768910*111277101368121410*12151216617817113181 0 = 2 × 3 × 3 × 5 × 13 × 9436487 × 11457951979 × 11409447134435290609 × 21534268840087254749
- 66101118= 2 × 3 × 11016853
- 66+101+118=285= 3 × 5 × 19

23) *Alphabetical frequency and related analysis (non-abjad based)*: In Table 19 alphabetical frequency and related analysis is presented. In non-abjad based approach there are 18 alphabets used in this *Sūrah*. For example, Alif (ا) is seen 4, 1 and 4 time in the 1st, 2nd and 3rd ayat respectively of the *Sūrah* Kawthar. The digit sum is 4+1+4=9. Also 4, 1 and 4 make the number 414. The same process is followed for the other alphabets. From Table 19, few big numbers are carefully generated and they are- 1635, 1234567891011121314151617 18, 421112111100000000, 110001210211110000, 420001110100101111 and 414212100100100211121111100121010010011010001001001001. It found that all of them are divisible by 3.

Table 19: Alphabetical frequency and related analysis (non-*abjad* based)

Alphabet	Serial No as per appearance	1st Ayat	2nd Ayat	3rd Ayat	Digit Sum	Linear digit
ا	1	4	1	4	9	414
ن	2	2	1	2	5	212
ع	3	1	0	0	1	100
ط	4	1	0	0	1	100
ي	5	1	0	0	1	100
ك	6	2	1	1	4	211
ل	7	1	2	1	4	121
و	8	1	1	1	3	111
ث	9	1	0	0	1	100
ر	10	1	2	1	4	121
ف	11	0	1	0	1	010
ص	12	0	1	0	1	010
ب	13	0	1	1	2	011
ح	14	0	1	0	1	010
ش	15	0	0	1	1	001
ء	16	0	0	1	1	001

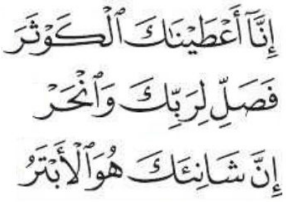


Figure 1: Sūrah Al-Kawthar, copied from the holy Qur'an

ه	17	0	0	1	1	001	
ت	18	0	0	1	1	001	
Sum	171	15	12	15	42	1635	

- 421112111100000000= 2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 3 × 5 × 5 × 5 × 5 × 5 × 5 × 5 × 5 × 41 × 293 × 116849
- 110001210211110000= 2 × 2 × 2 × 2 × 3 × 5 × 5 × 5 × 5 × 3666707007037
- 420001110100101111= 3 × 131 × 46441 × 93827 × 245261
- 951114431411211111=3 × 11 × 73 × 394817115571279
- 41421210010010021112111110012101001001101000100100 1001=3 × 613229 × 22949353279032374464490822 3 × 15020784203869 × 65315429
- 123456789101112131415161718 = 2 × 3 × 3 × 97 × 88241 × 801309546900123763

Table 20: Non-*abjad* based Analysis on lateral arrangement

Ayat			**Numerical value**	**Divisible number**	**Comment**	**Numerical value (reverse order)**	**Divisible number**	**Comment**
1st	**2nd**	**3rd**						
1	11	1	1111	11 × 101		1111	11 × 101	
2	12	2	2122	2 × 1061		2122	2 × 1061	
1	7	15	1715	5 × 7 × 7 × 7		1571		prime
1	7	1	171	3 × 3 × 19	Divisible by 3	171	3 × 3 × 19	Divisible by 3
3	10	2	3102	2 × 3 × 11 × 47	Divisible by 3	2103	3 × 701	Divisible by 3
4	13	16	41316	2 × 2 × 3 × 11 × 313	Divisible by 3	16134	2 × 3 × 2689	Divisible by 3
5	6	6	566	2 × 283		665	5 × 7 × 19	
2	8	17	2817	3 × 3 × 313	Divisible by 3	1782	2 × 3 × 3 × 3 × 3 × 11	Divisible by 3
6	1	8	618	2 × 3 × 103	Divisible by 3	816	2 × 2 × 2 × 2 × 3 × 17	Divisible by 3
1	2	1	121	11 × 11		121	11 × 11	
7	14	7	7147	7 × 1021		7147	7 × 1021	
6	10	1	6101		prime	1106	2 × 7 × 79	
8		13	813	3 × 271	Divisible by 3	138	2 × 3 × 23	Divisible by 3
9		18	918	2 × 3 × 3 × 3 × 17	Divisible by 3	189	3 × 3 × 3 × 7	Divisible by 3

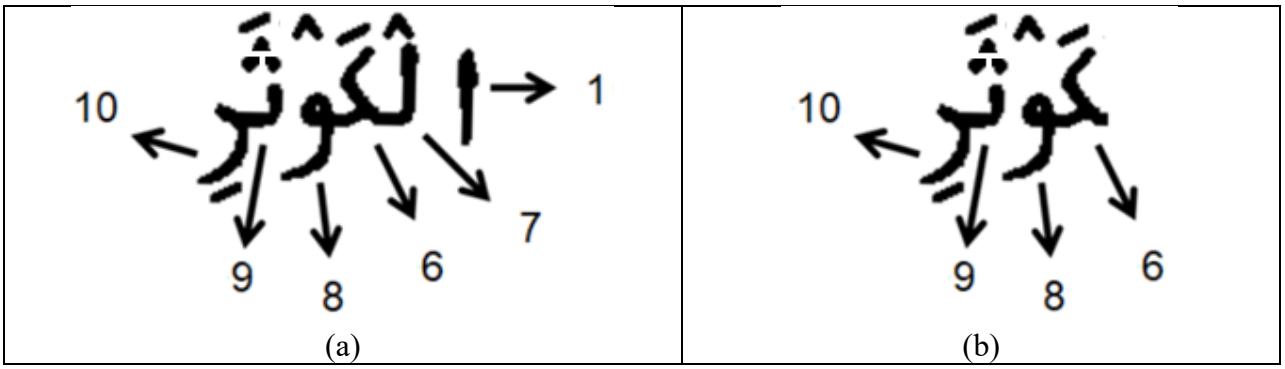
10		10	1010	2 × 5 × 101		1010	2 × 5 × 101	
Total			69648	2 × 2 × 2 × 2 × 3 × 1451	Divisible by 3	36186	2 × 3 × 37 × 163	Divisible by 3

24) *Non-abjad based lateral arrangement:* In Table 20 analysis (Non- *abjad* based) is done based on lateral arrangement-

- There are 01 prime number in both ordered (6101) and reverse ordered pattern (1571).
- Also, there are 07 numbers divisible by 3 in both ordered (171, 3102, 41316, 2817, 618, 813, 918) and reverse ordered pattern (171, 2103, 16134, 1782, 816, 138, 189).
- The remaining number is 7 (non-prime+ non divisible by 3) in both ordered and reverse ordered pattern. Therefore a stunning symmetry exists in the both the patterns.
- The number 177 (extracted from above three points) is also divisible by 3.

25) *Ordered and reverse-ordered arrangement (Non-abjad based):* In Table 20, the sum of ordered arrangement is 69648. The sum of reverse-ordered arrangement is 36186. Both are divisible to 3. Also the digit sum of both the numbers is 6 (divisible to 3).

- 69648→6+9+6+4+8=33→3+3=6
- 69648 = 2 × 2 × 2 × 2 × 3 × 1451
- 36186→3+6+1+8+6=24→2+4=6
- 36186 = 2 × 3 × 37 × 163



(a) (b)

Fig 8: Non-*abjad* values of a words *'al-Kawthar'and 'Kawthar'*

26) *Regarding the word 'al-Kawthar' (Non-Abjad based)*: In Fig 8 (a), Digit sum is 1+7+6+8+9+10=41 (a prime number).

27) *Regarding the word 'Kawthar' (Non-Abjad based)*: In Fig 8 (b), Digit sum is 6+8+9+10=33 (divisible by 3).

28) *Alphabetic (i.e. Harf-wise) positioning (Non-Abjad based)*: From Fig 8 (b), 68910 = 2 × 3 × 5 × 2297 (divisible by 3). In reverse order, 10986 = 2 × 3 × 1831 (divisible by 3).

29) *Few similarities:* From Fig 7 and 8, the conclusions from both *abjad* and no-*abjad* based analysis is perfectly similar, they are-
    - Both 757 and 41 are primes
    - Both the digit sums 726 and 33 are divisible by 3.
    - Both the numbers 206500200 and 68910 and both the reverse numbers 200500620 and 10986 are divisible by 3.
30) *Regarding the 'Shaddah' harfs (i.e. alphabets):* As per appearance, in the calculation of Table 2, 3 and 4 all the *harf*s (e.g. ن in 1st Ayah, ل and ب in 2nd Ayah, ن in 3rd Ayah) having *Shaddah* are considered one *harf*. The same is also done for Table 16, 17 and 18.
    - The *abjad* sum of the *Shaddah harf*s is 132 (=50+30+2+50, values are taken from Table 2, 3 and 4), which is divisible by 3 also.
    - The non-*abjad* sum of the *Shaddah harf*s is 24 (=2+7+13+2, values are taken from Table 16, 17 and 18), which is divisible by 3 also.

4. CONCLUSION

In the 1st ayah of *Sūrah* Kawthar, the Last Prophet Muhammad, peace be upon him, was guaranteed the glad tiding of a heavenly river on the Day of Judgment besides numerous favours in both worlds.[13] In the 2nd ayah of *Sūrah* Kawthar the Prophet was advised to pray and sacrifice in the name of Allah as a sign of gratitude to his Lord. And in the last ayah of *Sūrah* Kawthar, the Final Messenger was assured that the one who hates him and publicly criticizes him is truly cut off from descendants and from any goodness. There are different reports about the historical background of the Surah, its reason of revelation and its significance. In a nutshell, this Surah depicts the assurance of success for the Prophet (1st ayah), advice of his duty (2nd ayah) and fate of the haters of the Prophet (3rd ayah).

Besides the language-based presentation, this paper presents a math-based approach to the Surah, which not only illustrates the stunning structure of the *sūrah* but also introduces the impossibility of being written by any human being, although it was revealed at the 7th Century. In the present study, few points are stressed upon, where the singularity of the *sūrah* is presented in terms of 'divisibility of 3', 'prime', etc. List of the numbers controlling the calculation of the study is presented in Table 21. Please be noted that 30 main points are mentioned in this study, which are explained in many sub-sections. Present findings can only act as a supporting document for similar studies in future, *in sha Allah*. From the study, the following major conclusions can be drawn:

[13] Al-Kawthar, Quran.com, available at https://quran.com/108

a. It is seen that the number '3' (i.e. three) is the number which is controlling/ influencing most of the calculations (as found from Table 21).
b. The *Sūrah* Kawthar is perfectly placed in the holy Qur'an, any dislocation may loss the numeric harmony.
c. Even the alphabets of the *Sūrah* Kawthar is managed with utmost mathematical precision, any disarray may cause problem in mathematical computation.
d. Such mathematical precision only ensures the creation of this *Sūrah* (ie. *Sūrah* Kawthar) by the almighty Allah *Subhanahu wata`ala* as well as the singularity of the holy Al-Qur'an.

The divisibility rule of the number '3' states that if the sum of the digits of a whole number is a multiple of 3, then the original number is also divisible by 3. In *Sūrah* Al-Kawthar, this rule is seen to be perfectly matched in most of the points. Also in other studies, some scholars explored its amazing status towards number 10.[14] Of course, there maybe many more contexts from which this surah can be studied and its pearls can be explored, and the same is also applicable for other *sūrah*s of the holy Qur'an and the holy Qur'an itself as a whole.

Table 21: List of the numbers controlling the calculation of the study

Point No	Subject	Calculation is controlled by			Prime	Others
		3	7	19		
1	*Digit sum (DS)*	√				
2	*Similarity in DS of DS*	√				
3	*Similarity in the sum of the corresponding DS*	√				
4	*Similarity in the subtraction of the corresponding DS*	√				
5	*Similarity in DS of multiplication:*	√				
6	*Existence of π in sum of division:*					3.14 $(i.e.\pi)$
7	*Similarity in sum and multiplication of DS*	√				
8	*Alphabetic (i.e. Harf-wise) arrangement*	√				200
9	*Abjad based lateral arrangement*	√			√	
10	*Ordered and reverse-ordered arrangement (Abjad based)*	√				
11	*Regarding the word 'al-Kawthar' (Abjad based)*				√	
12	*Regarding the word 'Kawthar' (Abjad based)*	√				
13	*Alphabetic (i.e. Harf-wise) positioning (Abjad*	√				

[14] Quran Math Miracles, Ep 2: Amazing Math of Shortest Chapter, found in https://www.youtube.com/watch?v=g4unpZxi1uA, Last visited 06/07/2022

Point No	Subject	Calculation is controlled by			Prime	Others
		3	7	19		
	based)					
14	*Sūrah –based arrangement*	√				
15	*Sūrah –based positioning*	√				
16	*Ayat–based positioning*	√				
17	*Existence of few Primes*				√	
18	*A Stunning inherent similarity*					200
19	*Used alphabets (considering the sūrah as whole)*				√	
20	*Used alphabets (considering each ayat separately)*	√	√			
21	*Alphabetical frequency and related analysis (abjad based)*	√				
22	*Numbering all alphabets as per the first appearance (non-abjad approach)*	√		√		
23	*Alphabetical frequency and related analysis (non-abjad based*)	√				
24	*Non-abjad based lateral arrangement*	√			√	
25	*Ordered and reverse-ordered arrangement (Non-abjad based)*	√				
26	*Regarding the word 'al-Kawthar' (Non-Abjad based)*				√	
27	*Regarding the word 'Kawthar' (Non-Abjad based)*	√				
28	*Alphabetic (i.e. Harf-wise) positioning (Non-Abjad based)*	√				
29	*Few similarities:*	√			√	
30	*Regarding the 'Shaddah' harfs (i.e. alphabets)*	√				

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