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**ISSN (P):** 2618-1355, **ISSN (Online):** 2618-1363

Issue 3, Vol 4, July-September, 2022

شاره ۱۳، جلد ۲۰۲۲ ولائی ستمبر ۲۰۲۲

# Mathematical Phenomena in the Holy Qur'an and their Significance An Analytical and Research Overview

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## Abstract:

It is an analytical and communitrative research study, supported by Muslim science history and Quranics. Examples of Muslim scientist's mathematical work, are given to show the importance of mathematical measurements and accuracy in Quranic instructive orders. Mathematics rules, laws and formulae are applied to practice of Islam, of its Quranics and they do show their practical importance and value in computing, calculation and production of ushr, zakat, prayer and fasting timings as well as divine ordained homages, related to sun and moon movements. Importance of topic (mathematical phenomena in the Holy Quran) is that it is totally impossible to act upon the Quranic orders of Allah<sup>almighty</sup> without their mathematical version (measurement, counting and calculation).

Allah,
Muhammad<sup>S.A.W</sup>,
Qur'an,
Mathematics,
Islamic Homages,
Muslim Scientists,
Five Pillars of
Islam, Austonomy.

**Keywords:** 

Mathematics have been involved in different universal phenomena since the origin of the universe. Mathematical knowledge plays a key role in the performance of different religious obligations and condacts since it is impossible to determine and fix, even the basic initial limits, quantities and actionary directions witout it. Regarding role of great muslim scholars, scientists and especially muslim mathematicians, remained very precious and prominent in the imitation of our kind and holy prophet Hazrat Mohammad<sup>(P,B,U,H)</sup>, his companion (As'hab-ur–Rasool<sup>R,A</sup>), their fore followers (Taba'een<sup>R,E</sup>), next followers (Taba Taba'een<sup>R,E</sup>), saints<sup>R,E</sup>, four Imams<sup>R,E</sup>, Islamic scholars and other God fearing and well wishing, upcoming religious problems solution seekers. They have thrown mathematical light of comprehension and accuracy on different Qura'nic topics and verses in order to determine their goals. Their works have been mostly linked with performance of Islamic vows, digital countings, determinations, statistical illustrations, mentioning the actionary limits and different Qura'nic miracles. Research about the role of mathematics in understanding the Qura'nic concept is as vast as research on Qura'n itself. Reason for it is that, after understanding and picking the orders and instructions of Allah almighty, present in the Qura'n, next comes the stage to act upon them, to be facilitated of their

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blessed light on the straight pathway of life. Infactevery Qura'nic order or instruction requires its mathematical illustrative version for its practical implementation.

"In our routine meaning Qura'n is not a book, but it is Al-Kitab (a proper noun meaning a specific book). Meaning some writing. Allah (almighty himself declared its name and this word is used in the holy Qura'n abundantly. This word is present at 350 places in the holy Qura'n.)" (1)

"﴿ وَلِتَعْلَمُواْ عَدَدَ ٱلسِّنِينَ وَٱلْحِسَابَ ﴾ "(2)

"﴿يُوصِيكُمُ ٱللَّهُ فِيْ أَوْلاَدِكُمْ لِلذَّكِرِ مِثْلُ حَظِّ ٱلأُتْثَيَيْنِ فَإِن كُنَّ نِسَاءً فَوْقَ آثْنَتَيْنِ فَلَهُنَ ثُلُثَا مَا تَرَكَ وَإِن كَانَتْ وَاحِدَةً فَلَهَا ٱللَّبَصْفُ وَلاَبَوَاهُ فَلِلُّمِهِ ٱلثُّلُثُ فَإِن كَانَ لَهُ وَلَدٌ فَإِن لَمْ يَكُنْ لَهُ وَلَدٌ وَوَرِثَهُ أَبَوَاهُ فَلِأُمِّهِ ٱلثُّلُثُ فَإِن كَانَ لَهُ إِخْوَةٌ فَلِأُمِّهِ ٱلسُّدُسُ مِن بَعْدِ وَصِيَّةٍ يُوصِى عَالَى اللَّهُ عَلْمُ وَلَدٌ فَإِن لَكُمْ نَفْعاً فَرِيضَةً مِّنَ ٱللَّهِ إِنَّ ٱللَّهَ كَانَ عَلِيماً ﴾"(3)

Munshi Zakaullah (1832-1910)<sup>2</sup> wrote in his book, Usool Hindsa also famous as Ba-TehreerUqleedis:

"Mathemical knowledge is (important) part of every insight view of logical knowledge." (4)

Another Islamic mathematics scholar Al Sheikh-ul-Ajal Ela Abdullah bin Musa Al-Kkwarzimi said in his famous book titled: Al-Kitab Al-Mukhtasir fi Hisab Al-JabarWa Al-Muqabila,³during his discussion about mathematical knowledge:

"وانى لمانظرت فيما يحتاج اليه الناس من الحساب وجدت جميع ذلك عدداووجدت جميع الاعداد انما تركبت من الواحد والواحد داخل في جميع الاعداد ـ ووجدت جميع ذلك ما يلفظ به من الاعداد ما جاوز الواحد الى العشرة يخرج مخرج الواحدثم تثنى العشرة وتثلث كما فعل بالواحد فيكون منها العشرون و الثلثون إلى تمام المائة ثم تثنى المائة وتثلت كما فعل بالواحد وبالعشرة إلى الألف ثمّ كذلك يردد الألف عند كلّ عقد إلى غاية المدرك من العدد ـ ووجدت الأعداد التى يحتاج إليها في حساب الجبر و المقابلة على ثلثلة ضروب وهي جذور واموال وعدد مفرد لا ينسب الى جذر ولا الى مال ـ "(5)

(After (certain/some) deliberation, I did come to know about people's need of digits for the mathematics. And I also found that all the (compound) digits are synthesized from (single) digits. Also that (these) single digits are involved (in building of) all (compound) digits, which are (read) from one to ten. At first single digit is written (during this process), then these tens are doubled and three folded, as before it was processed with that (singles). Then the same act

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 $Khwarizmi\ and\ formerly\ Latinized\ as\ Algorithmi,\ was\ a\ Persian^{[4]5]6]} polymath\ who\ produced\ vastly\ influential\ works$ 

 $in \,\underline{mathematics}, \underline{astronomy}, and \,\underline{geography}. \,Around \,820 \,CE \,he \,was \,appointed \,as \,the \,astronomer \,and \,head \,of \,the \,library \,of \,according to the according to$ 

the House of Wisdom in Baghdad.

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<sup>&</sup>lt;sup>3</sup>Muḥammad ibn Mūsā al-Khwārizmī (Persian: Muḥammad Khwārizmī څرين موۍ ځولزې; c. 780 – c. 850), <u>Arabized</u> as al-

is carried out with ten (10) until it gets thousand (1000). Same is repeated at every junction (where digit gets a new turn as 10,100,1000, 10000 and so on) till the utmost limits of (human) perception of these digits. And the digits which are required (for different acts) of mathematics in Aljabar wa Muqabilah (solution of equations), on three multiplication acts, which are squareroots, magnitudes and single digits. And these single digits are neither related to squarerootsnor to magnitudes.)

According to Allama Ibn-e-Khaldoon mathematics is:

"The knowledge towards characteristical value and use of digits. It may be specific or of indirect acquired phenomena" (6)

"When a certain type of formula or preposition has been verified in specific cases but is not known to be true in general, the method of mathematical induction is often found extremely valueable in determining its validity." (7)

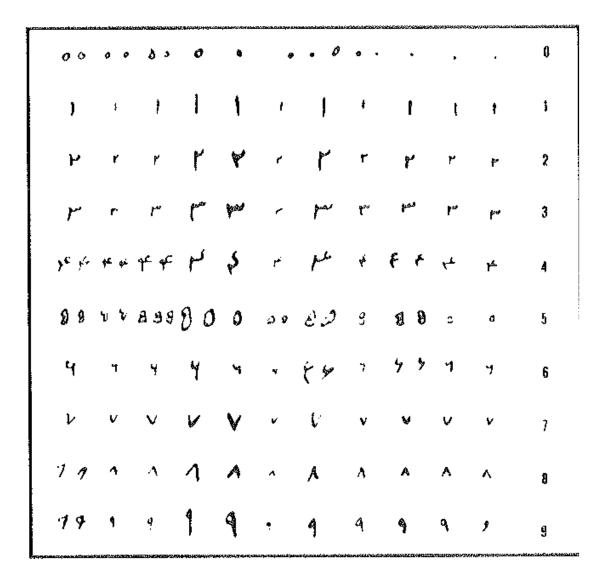
Abi Al-RehanAlbaroni wrote in his book Al-Qanon Al-Masaudi (part-1):

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"كل من استعمل شهور القمر سمّى كل اثنى عشر منها متوالية سنة قمرية، وقد بقى منها إلى تمام السنة الشمة عشرة ايام و نصف عشر بها
تسبق سنة القمر سنة الشمس في المرةالواحد فمن اراد الاخذ بكليمها احتاج الى الحاق ما يجتمع من ذلك اسبق في المرات "(8)
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(One who uses (depends) the lunar months, assumes a lunar year a clusture of twelve continuous lunar months. But there it is fifteen days less to complete the (solar) year. For this reason once lunar year exceeds the solar. For this reason lunar year reaches to its end before the solar year. so one who extracts (consider/use) both the calendars mutually, has (the need) to finish (solve) this ultimate difference.)

"Before the rise of Islam, most of the people used Roman numbers to count, (I, ii, iii, iv, v etc.). But this was not a good system. The Arabs introduced a new system of numbers. Perhaps the most important contribution of the Muslims in arithmetic was the introduction of this system of reckoning. They used Arabic numerals with a point for zero (0))." (9)

Arabic numbers were simple, integral and easy to use practically while Roman numbers were relatively complicated, lengthy and of limited nature.



The development of Arabic Numeral" (10)

Any informative topic can not be completed and finalized without some mathematical application termed as biometry, chemometry, physiometry, geometry, trigonometry, algebra, astronomy, equations, econometry, psychometry, pharmometry, finance and banking, treasury affairs and so on.

#### 2. The Holy Qur'an and Mathematics:

(The best among you is who learns the Holy Qur'an and teaches it.)

(Superior among you is who learns the Holy Qur'an and teaches it.)

The Hadith denotes that Qur'an is superior among all other sources of knowledge. In other words a relation with Qur'an brings eminance. For example Hadith is the most reliable, genuine, authentic and pre-eminent among all other knowledges except the Qur'an. Reason is its close and deep relation with Holy Qur'an, as it is an practical and illustrative phenomenon of the Qur'an. Similarly, mathematics has very close relation with Qur'an. The first thing, the origin of mathematics is of heavenly nature. Second is the practice and implimentation of Qur'anic orders, require their mathematical version instead of theory or mere wording:

"Qur'an Majeed is most eminent and of highest grade, among all the books and knowledges being taught in the world. And the most superior and most important is "Qur'anics." (13)

"All the knowledges other than Qur'an, depend on the Qur'anics for their superiority. So the knowledge would be relatively more eminent, more it has the direct portion of Qur'anics in it. As an example, the knowledge of Hadith has its superior level, being illustrative, interpreter and expositor to Qur'an." (14)

(And we sent down the reminder (The Qur'an) to you, so that you explain to the people what has been revealed for them, and so that they may ponder.)<sup>4</sup>

(He does not speak out of (his own) desire. It is but revelation revealed (to him).)<sup>5</sup>

"Hazrat Idrees<sup>E.S</sup> initiated Wisdom and Astronomy, first time. Allah almighty gifted him the knowledge about heavens, their composition, heavenly bodies and their closing and disclosing acts and centers. Also an insight into their inter attraction rules and secrets. He was the scholar

<sup>&</sup>lt;sup>4</sup>Quran-e-Karim, English translation by: Justice Mufti Taqi Usmani, <a href="http://www.noorehidayat.org">http://www.noorehidayat.org</a> and quran@noorehidayat.org archived on 27-11-2020

<sup>&</sup>lt;sup>5</sup>Quran-e-Karim, English translation by: Justice Mufti Taqi Usmani, <a href="http://www.noorehidayat.org">http://www.noorehidayat.org</a> and quran@noorehidayat.org archived on 27-11-2020

of Numeration. If all this informative knowledge was not exposed by him, humans were never able to reached it." (17)

"Perhaps you may assume that number of months is twelve in all calendars of today. Question then arises that what surprise reality Qur'an has exposed in this concern. But you are not right here." (18)

"Astronomy is the most ancient and revealiuos knowledge which was conveyed from creator of universe (Allah almighty) to humans through his Prophets<sup>E.S.</sup>." <sup>(19)</sup>

"Hazrat Idrees- His name is Akhnookh. He is grand father to Hazrat Nooh<sup>E.S</sup> 's father. He is the first prophet after Hazrat Adam<sup>E.S</sup>. Hazrat Sheis bin Adam<sup>E.S</sup> is his father. He is the first who wrote with pen. He did also initiate sewing cloths and wearing the sewed cloths. People used to wear animal leather before. He was the first to make the weapons. He invented the balance and measure scale. He did start counting and Astronomy." <sup>(20)</sup>

#### Use of Mathematics in Our'anic concepts & practices:

Actally Mathematical Qur'anic illustrations are to solve problems faced during Islamic practices and to make them easy. So, Qur'anic mathematical research circle is as wide as Qur'anics thereselves are. Mathematical Qur'anic illustrations are essentially required to carry out Qur'anic orders, as do or not to do, punishments, rewards, prayers and Qiblah direction determination, fasting and moon seeing, charity (zakat), pilgrimage (hajj), inheritance, ushr, jazia, trade and all the trading bonds etc. Every Qur'anic order contains some direction, counting, grading, indication or comparison according to the nature of its practice. It also suggests some purpose or goal which should be achieved properly. An appropriate action plan requires mathematical version of these Qur'anic orders as counting, numberline use to mention the range, intensity and direction of some act. As an example, charity is indicated in terms of quantity and also the 2.5% of total assets. We also read the holy comparison of donation between Hazrat Abubakar Siddique<sup>R.A</sup> and Hazrat Umar Farooq<sup>R.A</sup>. Act of accept and bow down before Allah almighty and to deny and remain disobedient are quite to opposite direction lines of belief.

"To highlight the importance of time, Islam has connected all the worship acts with it. Times of prayers are fixed. Act of fasting starts and ends on specific times. Haj act is to be performed during mentioned days and month of an Islamic year. Sacrifice slaughter of animal, is also

indicated. Zakat (charity) is applicable over the passage of one full year. So many orders of Shariah are related with time. But we are sorry to say that there is no such example of wasting the time and giving no value to it, as this ummah does." (21)

"Muslims, in order to determine the times of prayer and fasting, must know longitude, latitude, process and techniques of their measurements and their use to determine times of prayer. For this purpose, they must know mathematics like, arithmetic, geometry, trigonometry and spherical trigonometry. The Muslim scholars invented and used spherical trigonometry to overcome this religious necessity."(22)

Qura'n is the measuring instrument, goal determinator and right or wrong mentioning.

"All of the examples so far given concerning the various angles, from which one can approach the Qur'an have undoubtedly been **subjective** in nature; however, there does exist another angle, among others, which is **objective** and whose basis is mathematical." (23)

Among the human race, prophets are well mannered and the most obedient humans. They are representatives of Allah almighty and appointed heads of their ummahs. Their selection criterions, actual numbers, periods to stay and duty in this world, instruction conveying means and sources, directions and areas of duty, all belong to Godly mathematics. Not only the world but the whole universe is a soverion sample of symmetry and perfection. In such perspective, both the numbers and numbering of his prophets with an ending at Hazrat Mohammad (P.B.U.H) and their intervals are surely pre-planned and pre-decided things. Instructional needs, people attitudes, warnnings, happenings, judgemental decisions and incidental actions is the long history of different ummahs, all have their own mathematical versions of application at their stages. Sonami of Hazrat Nooh<sup>E.S</sup> was with pre-mentioned and with pre-chosen targets. Its area, intensity and timing were also of mathematical values. Life of Hazrat Musa<sup>E.S</sup> was mathematically planned with all its events and incidents. Similarly, miracles in Qur'an asstick of Hazrat Musa<sup>E.S</sup>, his bright hand, quick movement of throne of Quine Saba, lifting Hazrat Eisa<sup>E.S</sup> alive and lastly the breaking of moon by a finger pointing of the last Prophet (S.A.W.S) of Allah almighty, all are actually quite mathematical science applications of Godly mathematics. While human mathematics is relatively of very low grade and limited level. Allah almighty invites the humans in his Qur'an to investigate, search, find out and understand all such phenomenon instead of a blind belief.

#### Historical perspectives of Qura'nic Mathematics:

Different knowledgemen and religious problem solvers among the muslims converted Qur'anic topics of its verses into their possible accurate mathematical, statistical and digital forms according to their practical requirements. It was really an enormously great Qur'aic research work of sincere, courage and hardship value.

"Muhammad bin Musa Al-Khawarizmi, first time in history, worked on this topic. He calculated tables for regulating daylight prayers." (24)

"The first watch invented by Ibn-e-Farnas in Islamic Spain, in ninteenth century, was accurate in its time. Its name was Al-Muqatah. Muslims invented astronomical watches for astronomical stations. Now we can observe their diagrams. Watches were common in the period of caliph Haroon-ur-Rasheed. Watch making knowledge was conveyed to Europe by latin translation of arabic books." (25)

Watch making skill was not limited to Spain. Muslims of other countries also showed their ability to make new designs and varieties. Techniques and machinaries were unique and different for each but the time purpose was same for all. So each was an invention of its own kind. They worked hard. Horse riders revolve to tell the time hour in some, while some others with a special alarm or interesting show. Al this was done with old technology which is an extra ordinary thing, showing intelligence and inventive mind of those muslim scientists.

(In all equilateral triangles, when column (altitude) is multiplied with half base, on which this column is located (falls),, is called area of that triangle. And in all (other) specific equilateral triangles, when one margin (side) is multiplied with the half of the other, is the area (of that triangle).)

Among them Omar Khayam was a prominent figure. He was a famous scientific scholar and a great knowledgeman of his time. He became most popular and exampleless in very initial of his carrier. He made great inventions in mathematical sciences and invented many research instruments.

"No account of mathematics in Islamic civilization can be completed without the mention of Omar Khayyam (1048-1131), most known in the west for his Rubaiyat (Quatrains). Khayyam wrote an undiscovered treatise called problem of Arithmetic (Mushkalat al-hisab), a key

treatise on cubic equations (the Risala), a lengthy commentary on Euclid, and many other works on astronomy, music, and algebra, in addition to his better-known poetic and philosophical works." (27)

Omar Khayam remained related with different state powers, courts and research institutions and showed wonderful performance in finding research with speed, broadness and quality. So he was demanded everywhere. His patrons, supporters and fan rulers gave good remarks about him and he was also well observed of their behaviourial attitude and psychology and was always well supported. So, his inventive researchs were quite smooth.

"Qazi-ul-Qazat Abu Tahir Abdul Rehman introduced Omar Khayam to a khani ruler of Bukhara, Khakan Shamas-ul-Malik (1068-1079 era). He took great care of Khayam and introduced him to Malik Shah Saljoki court. Malik Shah appointed him as royal astrologer and head of observatory at Isfahan at the age of 26. Khayam wrote epilogue of Iqleedus and a journal on Physics in 1077. He completed Malik Shahi royal Zeech in 1079." (28)

"UMAR KHAYYAM" Umar Khayyam, born as Abu Al-Fath Omar ibn Ibrahim Al-Khayyam in the year 443 AH/1045 CE in Persia. He is great mathematician and a poet. In the West, he was better known for his poems. He died in the year 527 AH/1130 CE in Nishapur." (29)

"Sometime after 1070, he became the head of the team of the most distinguished astronomers of the eleventh century, who compiled Zij Malik-Shahi (Malik Shah Astronomical Tables) at the observatory in Isfahan, a city where he spent the eighteen most peaceful years of his life. The small portion of his work that has survived, consists of tables of ecliptic coordinates and of the magnitudes of the 100 brightest fixed stars. Around 1079 he proposed a reform for the calendar then in use. According to his reform, "the average length of the year was to be 365.2424 days (a deviation of 0.0002 days from the true solar calendar) a difference of one day, thus accumulating over a span of 5,000 years. (In the Gregorian calendar, the average is 365.2425 days long, and the one day difference is accumulated over 3,333 years)" (Youschkevitch and Rosenfeld 1980, 324)." (30)

"Omar Khyam was an excellent expert of Sciences, Maths, Astronomy, Ethics, Qur'an, Hadith, History and many other knowledges, besides he was also a famous poet of his time. He also had a good approach in claywork that of sculpture and statue making. He was also appointed as royal medical officer and fortune teller to Malik Shah, the King. He was with the title of "Musahib" in his court. Nizam Aroosi Samarqandi, the auther of Chahar Maqala, Abdul Rehman Miangi auther of Zubda-tul-Haqaiq, Hakeem Sharaf-uz-Zaman Mohammad Ilaqi and

the famous medicine expert Ali bin Mohammad Hijazi Alqaini were four famous figures among his students" (31)

Even he was at the higher most post in the court of Malik Shah, but he did not loose his educational and research journey. An ever lasting knowledge thrist and an evolutionary inventing eager were present in his blood. So, he spent all time of his life in gaining or giving knowledge and his courage remain young in this regard till last momet.

"Umar Khayyam divided his work on equations into 25 categories, and then attempted to solve them giving numerical solutions for equations of first, second degree, that is those containing  $x^3$ . The Arabian word, Hisab, which refers to the art of reckoning and, generally, to the process of determining unknown from the known quantities, was used to cover fundamental operations (addition, subtraction, multiplication and division), root extraction and algebraic procedures."

"Khayam took attention towards metaphysics at the age of 30. He translated Boo Ali Seena during his stay at Isfahan in 1079. Afterwhile, he wrote many journals on metaphysics problems in 1980 as "Risala Al-kon wa Al-Takleef", "Al-Jawab Un Salasa Masail", "Zaroorat tazad fi Al-Alam wa Al-Jabar wa Al-Biqa", "Risala Fil-Wajood", "Risala Fi-Kulyat Wajood". He was also fond of poetry and his countless rubayat are memorial. Besides being an expert of Mathematics, Astrologer, Philosopher and physician, he gained worldwide popularity as poet. He got a special matchless status in quatrain poet in Persian." (33)

Omar Khayam perplexed a long, sincere, difficult, serious, solemn, purposeful and hard journey of mathematical science research but he is an amazing quatroun and saint. So, he is known as a good poet and engrossed mystics in the history. Many Europeans introduced him as lunatic inspiring sufi, for a long period of history, until his precious work on mathematical sciences was explored well.

"A new chapter was created in the study of geometry when Umar Khyyam and later by Tusi, re-examined the fifth postulate of Euclid pertaining to the parallel line theorem, which is the very foundation of Euclidean geometry. Umar Khayyam in his treatise Fi Sharh Maa Ashkala Min Musadarat Kitab Uqlidus (concerning the difficulties of Euclid's elements) considers the quadrilateral ABCD with sides B and BC equal to each other and both perpendiculars to BC which is the BI-rectangular quadrilateral. Later in the western history, these findings were associated with Saccheri." (34)

In his famous book Tazkira volume-2, Allama Inayatullah Khan Al-Masharqi has narrated about origin of universe, everlasting continuous changes and its scientific phenomona as under:

"Astronomical observation proves that celestial bodies and astronomical objects are going round the star clustures and are scattered in different shapes and sizes. They have not come to an end. So, the process of creation still not disconnected. New astronomical bodies are being formed or olds are being vanished and destroyed. Their scattered materials are added to celestial pieces revolving, colliding, breaking and merging simultaneously. All this is endless and everlasting, both the destructive and the constructive. Man's limited vision expressed it in its limited writing that whole universe is of uninature. Its work style, merging designing, life formula, death secrets, coordinative disciplines and a unique Lord (Allah almighty), all are the same." (35)

Algebra got a speedy springing progress during the muslim era. They had their origin from Unani and Hindi mathematical digits and formulae. It was really a mathematical journey, during which a great achievement was made, as an ever mutative astronomical table (an itlas of the location, movement, rise and sit and all other movement related paths, the orbits), determination of Qiblah directiom, prayer timing, start end time of Fasting, Eids, Islamic calendar, climate and seasons. So, a series comprising of beneficial and humen helping inventions and mutative amendmental evolutions got started which are still in human use in some form such as watch, irrigation system, digging of canals, roads and ways construction work, different routine uses of geometrical and algebraic laws, and instrumental measurements. Also the radius, diameter, center, circumference and area of earth were measured. Moreover, longitudes and latitudes were established.

Among the muslim methematical scholars, Mohammad bin Musa al-Khwarzimi is called the father of Algebra. Since, he devoloped the mathematics in a strange and broad way, which was never done before. He converted and developed arabic digits from hindi digits first time. He also gave the idea to use zero, ones, tens, decimals, logarithm tables, different algebric equations, trigonometry tables, geometrical use of geography in digging canals for irrigation purpose, regulatory laws involvement in water flow and water level, mathematical surveying for long tracks, ways and roads, mathematical handling of loan barrow and treasury affairs, different multiple state administration problems finding, their correct assessment and liable appropriate mathematical solutions, accuracy, ease and comperhension in different Qur'anic instructive orders, moreover certain Qur'anics of their connectivity with the movements, stages and position of heavenly bodies present in the sky as to determine eids, prayers timing, Qibla direction, fasting timing, ushr, zakat and many other Islamic social routines. Measurement of

certain geometrical shaped land and other things or semilunar areas were also made possible. Entry of angle in geometry and its broad use, all included in Mohammad bin Musa al-Khwarzimi's historical mathematical work.

"Arabs in Morocco and the eastern Arabs who, under the caliph al-Mansur, had established a new capital at Baghdad, a city that was shortly to become the new center for Mathematics.

"The first century of the Muslim empire had been devoid of scientific achievements. This period (from about 650 to 750) had been, in fact, perhaps the nadir in the development of mathematics." (37)

"Al-Mamun established at Baghdad a "House of Wisdom" (Bait al-hikmah) comparable to the ancient Museum at Alexandria. Among the faculty members, Muhammad ibn-Musa al-Khowarizmi was a mathematician and astronomer. Al-Khowarizmi wrote two books on arithmetic and algebra which played very important role in the history of Mathematics." (38)

"The Al-Jabr has come down to us in two versions, Latin and Arabic. Compose a short work on calculating by (the rules of) completion and Reduction, confinding it to what is easiest and most useful in arithmetic, such as men constantly require in cases of inheritance, legacies, partition, law-suits, and trade, and in all their dealings with one another, or where the measuring of lands, the digging of canals, geometrical computation, and other objects of various sorts and kinds are concerned." (39)

Famous muslim mathematician Yaqub Kundi wrote many books on digital systems and their routine uses. Basis of modern Arithmatics and triangular and circular geometry and their use in astronomical measurements was also invented as measuring the distance between planets, stars and their dimensional and structural measurements, all are calculated quite accurately by geometrical formulae. Common formal geometry and geometrical algebra, real numbers, whole numbers, all related calculations, their characteristics, measurements, information chapters, and fractions were invented by Yaqub Kundi and they did not exist before. Use of compass was introduced. Another popular muslim mathematician Ibn-e-Qiraa waved new strange ideas and practices in mathematical sciences and measuremental calculations. Mostly his work related measurs, squares, rectangular, triangles, areas, their related problems and some calculatory solutions. Idea of cube was presented first time.

"The ninth century was a glorious one in Arabic mathematics, for it produced not only al-Khowarizmi in the first half of the century, but also Thabit ibn-Qurra (826-901) in the second half." (40)

Since mathematics is quite accurate, clear and on logic, so mathematical language is always attractive and of heart striking nature. Individual may belong to even any thought, can not left unaffected of it. So, mathematical version of Qur'anics is the most convincing and convenient thing, practically.

"Even when analyzing the fate of human communities and man's ultimate destiny, Mashriqi has looked on everything as a mathematician. It was as a mathematician that he discussed in 1926 the theme with Einstein on his return from Cairo via Germany, and tried to persuade him to come out of the shell of a mere physicist." (41)

Allama Inayatullah khan al-Mashraqi was gifted with deep range of finding new unique views in research with an utmost reach to secrets, hidden thoughtful points in new sciences of the time, especially the Qur'an and mathematics.

"In a lengthy lecture at a conference of mathematicians at the Islamia College Peshawar, of which he had been the Principal, he attacked the current mathematical concepts of point, straight line and circle." (42)

"In this ecstatic exposition, which is indicative of the unsubdued glow and vigour of the man who made it, the Allama challenges the efficacy of the mathematical units of calculation in assessing the "conduct" and "behavior" of Nature; he insists scientists to deal with "life" instead of "dead" matter; he asked them to take over the governance of the world." (43)

He has explored such an amazing, dramatic and fancy set of progressive evolution that his reader comes to be a part of it and he gets in a totally astonished world.

"He emphasis that man must evolve to higher forms of existence and be able to travel at a speed of millions of miles per second; man must become omnipresent and omniscient to be able to create life and have a "hand shake" with his creator." (44)

So all these logics prove that every Qura'n or Islam related writing, its illustration, tafseer, view, search and do or not to do Godly order, are all within the parameter of mathematical Qur'anic concept.

"According to taqweem tareekhi (Qamoos Tareekhi) from Abdul Quddus Hashmi, P.3 (Islamic research institute) death day of Rasool<sup>S.A.W.S</sup>an accord with taqweem shamsi, is May 28, 632 A.D. "<sup>(45)</sup>

Qur'anic mathematical research work is essential for Qur'anic practices. So Islamic history contains a lot of such research by well oriented great muslim scientists. They took it as religious

education. Actualy it was a practice version of Qur'anic orders and Godly instructions to be followed. Imam Abu Hanifa<sup>R.E</sup>, a famous muslim religious scholar, was also an expert of mathematics. Numerous universal secrets and Qur'anic miracles are well illustrated by mathematical applications and our sight does not remain limited in this regard. Besides ancients, now Allama Inayatullah Khan al-Mashrqi is an illustrative thinker of Qur'anic education, of his own unique style. He has played a great key role in awakening the muslim Ummah from its deep and senseless sleep of ignorance and he stired the Ummah violently. He gave a Godly colour to modern scientific mathematical knowledge. He poured a specific special attention and concentrated a focous on mathematics and statistics in such a way that a worldwide Godly Qur'anic tide spread all over the world.

"If I have presented a book ("Tazkirah" Ed.) to the world that has no peer it is because of mathematics. If I had left mathematics and gone on to higher things, it is through mathematics, if I have left studying mathematics and have seen a higher truth in the Quran it is through mathematics. In fact, the first truth of Quran dawned on me while I was busy day and night preparing for the Mathematics Tripose at Cambridge." (46)

Geography had been of historical comprehensive position among the other maths. Nothing can be observed and visualized on this earth and its surrounding universe, of its past, present and even the estimates to future by its original facts, without use of geography. So, earth related knowledge gets fogged and certain incidents and situations remain unmarked.

"What was the city of cave people? The place where all authentic maps and itlases mention the residues of this historical city, Afsos, are situated on the westren coast of Turky, round about 60 km south from Izmeer port and 42 km west to Aaydan city. Syed Abu-Al Aala Modudi<sup>R.E</sup> also, in his third part of Tafheem-ul-Qura'n, gave a map for story of Zulqurnain, in which he has mentioned Afsos at the west coast of Ledia (now Turky). "<sup>(47)</sup>

"Hazrat Ibrahim<sup>E.S</sup>, known as the "friend of Allah almighty" and "father of prophets". His name has been narrated 69 times in 25 surahs of the Holy Qur'an. "<sup>(48)</sup>

"Hazrat Loot<sup>E.S</sup>, his name has been revised 27 times, in the Holy Qur'an." (49)

"Hazrat Shoab<sup>E.S</sup>'s great name is present at 11 places in the Holy book." (50)

"Adnal-Ard refers to the low-lying lands of Palestine near the Dead Sea, lands that sink as low as 392 m below sea level." (51)

#### Ayatullah (Phenomona of Allah almighty):

(It is He who breaks the dawn. And He made the night for rest, and the sun and the moon for calculation. Such is the disposition of the Almighty, the all knowledge.)<sup>6</sup>

We do start from faith, go through rights, assigned duties and essentials. Then comes the stage of social deals and handling. Apparently these worldly shown affairs are to be carried out according to Allah's will and his holy instructions, both for worldly and judgement day's success. And here we find certain directions, magnitudes, timings, frequencies, counting and ratios like mathematical values. Next comes the stage of grave "life", followed by a judgement process of all worldly affairs. This detection plays a key role in determination of final destiny. It is quite mathematical and statistical process of Godly mathematical phenomenae, beyond human approach. Since humans can not imagine the great Godly balance of judgement day, its settlement, good and bad deeds being weighed, whole life countings to be presented in front of Allah almighty. Performance sheets of every individual with even minute details and amazingly with no error or mistake. Nothing could be hidden from Allah almightly. All is of above level for humans but still we believe and know it correctly.

(The sun and the moon are (bound) by a (fixed) calculation. And the vine and the star both prostrate (to Allah). He raised the sky high, and has placed the scale. So that you should not be wrongful in weighing. Observe the correct weight with fairness, and do not make weighing deficient.)<sup>7</sup>

(A demanding person has asked for the punishment that is going to befall. The disbelievers, ther is no one to avert it. (And it will come) from Allah, the Lord of the stairways. To whom

<sup>7</sup>Quran-e-Karim, English translation by: Justice Mufti Taqi Usmani, <a href="http://www.noorehidayat.org">http://www.noorehidayat.org</a> and quran@noorehidayat.org archived on 27-11-2020

<sup>&</sup>lt;sup>6</sup> Quran English Translation, Talal Itani, Clear Quran, Dallas, Beirut, Lebanon, p. 49, www.ClearQuran.co archived on 27-11-2020

ascend the angles and the spirit in a day the length of which is fifty thousand years. So, observe patience, a good patience. They see it far off. And We see it near.)<sup>8</sup>

The belief, oneness of Allah almighty, effects all the universe in unique and strange way. It do penetrates its effects broadly and minutely. Every object and heavenly bodies are moving on very specific and predecided or preplanned basis on predesigned roots. All this is going on from an infinity period, without any error, missing or mistake, seeming no end. Now suppose if there were two or more authorities of this universe instead of one Allah almighty, and they were to pass their orders, probably, in their own different ways, imagine that what would have emerged out then, surely a real confusion, continuous disturbance and total destruction. All the symmetry and organizational acts of universe would have abolishes.

"All the proofs are before human eyes. Inspite of one, someone said that there are two Gods and someone else declared three. Another claimed numerous Gods. And some humans cut and divide God acts and they did distribute their work. They accepted a God for rain, another to fortune and some other of fire. So there, a separate God for every forceful act of the world and finally a super Chief God upon them. So in this way, people minds were violently misguided and shaked of their intellectuals." (55)

(And do not say, "There are 'Three' ", Forbear from this: this will be better for you. Allah is only One Deity.)<sup>9</sup>

So all logical proofs lead to oneness of Allah almighty. Universal mathematical laws stamp upon its authenticity.

"﴿ وَلَقَدْ خَلَقْنَا فَوْقَكُمْ سَبْعَ طَرَآئِقَ وَمَا كُنَّا عَنِ ٱلْخَلْقِ غَافِلِينَ﴾ ﴿ وَأَنزَلْنَا مِنَ ٱلسَّمَآءِ مَآءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي ٱلأَرْضِ وَإِنَّا عَلَىٰ ذَهَابٍ بِهِ لَقَادِرُونَ﴾ "(57)

<sup>&</sup>lt;sup>8</sup>Quran-e-Karim, English translation by: Justice Mufti Taqi Usmani, <a href="http://www.noorehidayat.org">http://www.noorehidayat.org</a> and quran@noorehidayat.org archived on 27-11-2020

<sup>&</sup>lt;sup>9</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala Modudi<sup>R.E</sup>(www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm) archived on 27-11-2020

(And We have made seven paths above you. We were not novice in the art of creation. And We sent down rain from the sky in due measure and lodged it in the earth, and We are able to take it away as We will.)<sup>10</sup>

(At last, when our command came and the oven overflowed, we said, "Take into the Ark a pair of two from every species, along withyour family, -except those against whom the word has already been pronounced and (also take into it) those who have believed." And there were only a few who had believed with him.)<sup>11</sup>

(He said, 'What knowledge do I have of what they used to do? It is for my Lord alone to bring them to account – if only you could see-)<sup>12</sup>

(Allah will forgive you your sins, and will give you respite till an appointed time. The fact is that when the appointed time of Allah comes, it cannot be deferred. Would that you know it.)<sup>13</sup>

(So, When Moses completed the term.)<sup>14</sup>

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

Modudi<sup>R.E</sup>(www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm) archived on 27-11-2020

<sup>14</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

<sup>&</sup>lt;sup>10</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

<sup>&</sup>lt;sup>11</sup>Quran-e-Karim, English translation by: Justice Mufti Taqi Usmani, <a href="http://www.noorehidayat.org">http://www.noorehidayat.org</a> and quran@noorehidayat.org archived on 27-11-2020

<sup>&</sup>lt;sup>12</sup> The Qur'an A New translation, M. A. S. Abdel Haleem, Oxford University Press, Oxford New York USA, p. 235, 2004

 $<sup>^{13}\</sup>mbox{Tafheemul}$  Qur'an: English Tafseer of Holy Qur'an by ,<br/>Syed Abu ul A'ala

(These (two Signs) are from among the nine Signs (you will take)<sup>15</sup>

Similarly historical incidence of breaking of the moon into two pieces, is mentioned in the Holy Qur'an:

"﴿ ٱقْتَرَبَتِ ٱلسَّاعَةُ وَٱنشَقَّ ٱلْقَمَر ﴾ "
$$^{(63)}$$

(The Hour draws near, the moon is split in two.) 16

"So bursting of the moon indicates the judgement day nearby and may occur anytime. This sentence and next elaboration shows that moon did burst really at that time. People did see it bursting directly with their own eyes and they do state that soon after rising on 14th of moon, suddenly it burst. Its two pieces did appear on both sides of the hill, was present infront. Then only after a while they united. According to Ahadees, there is no reality and truth in this saying of some religious speakers that this incident was on pointing of Hazoor<sup>S.A.W.S</sup> as a requirement of nonbelievers of Mecca as a miracle." (64)

Here we see, according to perspectives of different situations, both in Qura'nic instructive orders and miracles, time, pace, distance, hurrying and slowness, work and power mathematical formulae are sure to involve.

"﴿ قَالَ يٰأَيُّهَا ٱلْمَلَأُ أَيُّكُمْ يَأْتِينِي بِعَرْشِهَا قَبْلَ أَن يَأْتُونِي مُسْلِمِينَ ﴾ ﴿ قَالَ عِفْرِيتٌ مِّن ٱلْجِنِّ أَنَاْ آتِيكَ بِهِ قَبْلَ أَن تَقُومَ مِن مَّقَامِكَ وَإِنِّي عَلَيْهِ لَقَوِيٌّ أَمِينٌ ﴾ ﴿ قَالَ آلَّذِي عِندَهُ عِلْمٌ مِّنَ ٱلْكِتَابِ أَنَا ٱتِيكَ بِهِ قَبْلَ أَن يَرْتَدَّ إِلَيْكَ طَرْفُكَ فَلَمَّا زَآهُ مُسْتَقِرًا عِندَهُ قَالَ هَٰذَا مِن فَضْلِ رَبّي لِيَبْلُوَنِي أَأَشْكُرُ أَمْ أَكْفُرُ وَمَن شَكَرَ فَإِنَّمَا يَشْكُرُ لِنَفْسِهِ وَمَن كَفَرَ فَإِنَّ رَبِّي غَنِيٌّ كَرِيمٌ ﴾ "(<sup>65)</sup>

(To his courtiers Solomon said, "Which of you can fetch me her throne before those people come to me in submission?" A mighty one from among the jinns submitted, "I shall fetch it to you even before you rise from your place. I possess the necessary power for it and am trustworthy." He who possessed knowledge of the Book, spoke out, "I will fetch it to you in the twinkling of an eye." As soon as Solomon saw the throne placed before him, he exclaimed: "This is by the Grace of my Lord so that He may test me (to see) whether I am grateful or

USA, p. 350, 2004

<sup>&</sup>lt;sup>15</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala Modudi<sup>R.E</sup>(www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm) archived on 27-11-

<sup>2020</sup> <sup>16</sup> The Qur'an A New translation, M. A. S. Abdel Haleem, Oxford University Press, Oxford New York

ungrateful! And the one who is grateful is grateful only for the good of his own self; as for the one who is ungrateful, my Lord is All-Sufficient and Self-Exalted.)<sup>17</sup>

(O you who believe !Do not feed on usury, compounded over and over.)<sup>18</sup>

(The sun and the moon, each voyaging (in its course) till an appointed time.)<sup>19</sup>

(It is He Who gave the sun his brightness and the moon her light, and ordained her phases precisely so that you may calculate years and dates from this. Allah has not created all this (for mere fun) but for a serious end. He makes His Signs manifest for those people who possess knowledge.)<sup>20</sup>

(The fact is that the number of months ordained by Allah has been twelve since the time He created the heavens and the earth, and out of these four are forbidden months: this is the right code of reckoning: therefore do not wrong yourselves by violating these months. And fight

<sup>&</sup>lt;sup>17</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala Modudi<sup>R.E</sup>(www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm) archived on 27-11-2020

<sup>&</sup>lt;sup>18</sup> Quran English Translation, Talal Itani, Clear Quran, Dallas, Beirut, Lebanon, p. 23, www.ClearQuran.co archived on 27-11-2020

<sup>&</sup>lt;sup>19</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

 $<sup>\</sup>underline{\text{Modudi}^{\text{R.E}}(\underline{\text{www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm})} \text{ archived on 27-11-2020}$ 

<sup>&</sup>lt;sup>20</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala Modudi<sup>R.E</sup>(www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm) archived on 27-11-2020

against the mushriks all together even as they fight against you all together: and note it well that Allah is with the Godfearing people.)<sup>21</sup>

(And determined the time of the rising and the setting of the moon and the sun: all these things have been determined by the same All Powerful and the All Wise One.)<sup>22</sup>

(Remember when you said to the Believers, "Does it not suffice you that Allah should help you by sending down three thousand angels?" -Yes, if you show fortitude and fear Allah in whatever you do, Allah will help you with (not three thousand but) five thousand angels, known by certain marks, in case of a sudden attack from the enemy.)<sup>23</sup>

(Every community has been given a fixed term; when the term expires, it can neither be put back nor put forward by a single hour.)<sup>24</sup>

(We summoned Moses to Mount Sinai for thirty nights and days, and We added to them ten, thus the term appointed by his Lord became full forty nights and days.)<sup>25</sup>

<sup>&</sup>lt;sup>21</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

<sup>&</sup>lt;sup>22</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

<sup>&</sup>lt;sup>23</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

<sup>&</sup>lt;sup>24</sup>Tafheemul Our'an: English Tafseer of Holy Our'an by ,Sved Abu ul A'ala

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

<sup>&</sup>lt;sup>25</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

 $<sup>\</sup>underline{\text{Modudi}^{\text{R.E}}(\underline{\text{www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm})} \text{ archived on 27-11-2020}$ 

(And it is He Who produced you from a single person.)<sup>26</sup>

(Indeed We afflicted Pharaoh's people with several years of famine and scarcity of food so that they should come to their senses.)<sup>27</sup>

(But as soon as We removed the plague from them after the expiry of the term that had been fixed for them, they would at once break their promise.)<sup>28</sup>

(Allah has created the earth and the heavens and all that lies between them, with the truth, and only for an appointed term; but most people disbelieve in the meeting with their Lord.)<sup>29</sup>

(We have commanded people to be good to their parents: their mothers carried them, with strain upon strain, and it take two years to wean them. Give thanks to Me and to your parents-all will return to Me.)<sup>30</sup>

 $Modudi^{R.E} (\underline{www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm}) \ archived \ on \ 27-11-2020$ 

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

<sup>&</sup>lt;sup>26</sup> Quran English Translation, Talal Itani, Clear Quran, Dallas, Beirut, Lebanon, p. 49, www.ClearQuran.co archived on 27-11-2020

<sup>&</sup>lt;sup>27</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

<sup>&</sup>lt;sup>28</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala Modudi<sup>R.E</sup>(www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm) archived on 27-11-2020

 $<sup>^{29}\</sup>mbox{Tafheemul}$  Qur'an: English Tafseer of Holy Qur'an by ,<br/>Syed Abu ul A'ala

<sup>&</sup>lt;sup>30</sup>The Qur'an A New translation, M. A. S. Abdel Haleem, Oxford University Press, Oxford New York USA, p. 262, 2004

(Allah alone has the knowledge of the Hour.) 31

(Those who take an oath to keep apart from their wives are given four months (for a final decision.)<sup>32</sup>

(Divorced women must wait for three monthly courses.)<sup>33</sup>

(Divorce may be pronounced twice.) 34

Mathematics in Figh:Figh is an important clue to Islamic law. Famous Islamic law experts (Fughas) have offered their God saking and greedless services in this regard. They had a good command of mathematics and they gave a rich performance in mathematical and statistical inventive research. They derived new orders from Qur'an and updated and refined the old. They gave an accurate mathematical version of Qur'anic instructions, making them clear, easy and relatively simpler to act upon. The concept of oneness of Allah almighty, positions of his prophets, basic pillars of Islam: prayers and its criterion that being clean with all its steps, the Qibla direction; Fasting (Roza) and crescent seeing parameters; charity (Zakat) calculation and distribution according to orders of Allah almighty; Pilgrimage (Haj) events, timing and durations; Islamic punishments, their purpose and ways of implimentation; Inheritance, ushr, jazia, loan barrow, trade and all such acts and engagement affairs and different problems or disputes related to them, all these are of mathematical deal. So, Qur'anics require good religious

<sup>&</sup>lt;sup>31</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

<sup>&</sup>lt;sup>32</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

<sup>&</sup>lt;sup>33</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

Modudi<sup>R.E</sup>(www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm) archived on 27-11-2020

<sup>&</sup>lt;sup>34</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala

Modudi<sup>R.E</sup>(<u>www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm</u>) archived on 27-11-2020

orientation, skilled wisdom, ability with a good probing knowledge of mathematics, in an Islamic law expert, the Faqeeh. For example Imam Abu Haneefa<sup>R.E</sup> was also an expert of mathematics and statistics. Acts are positive or negative by their nature, illustrated, acquired, derived or determined with mathematical rules of Fiqh. Digits, equations, minus, plus, multiply, divide and certain algebric formulae are involved, simply or in some complicated conditions. All past mathematical research, by muslim scholars, was of Qura'nic value (helpful and essential for religious obligations of social life). Family laws were discussed under the heading of manakhat (wedding affairs) in past.

"Personsl affairs: comprises non-economical relations between two persons as wedding (niqah), divorce (talaq), separation, then pre-wedding (iddat), heritery relations, child feeding expenses, guardianship, inheritance and lastwilling wish. At present these are known as personal affairs, in past munakhat and personal laws in English." (83)

State Affairs: State affairs are to be run according to Qur'an, in an Islamic state. There are so many departments, each with its own specific scope and activity circle. Finance, activity parameters, demonstrations, counting, activities and implementation like mathematics and calculations are involved. Departmental performance comprises tabulation and graphs. State administration is to keep a balance with suitable distribution of sources, appropriate guiding instructions, check and balance system and record keeping. State also does determines target, focus and goals. Even an Islamic calendar is used for state time table. In this way, Qur'an is explored in the whole society by mathematical accuracy.

"I did think that there would be orders about macro affairs in the Qur'an, but I was at the peak of surprise by knowing that there were clearcut instructions about every field of life." (84)

(Companions of Prophet<sup>S.A.W.S</sup> (Sahaba<sup>R.A</sup>) did not start year counting from the Prophetness of Hazrat Mohammad<sup>S.A.W.S</sup>, nor did from His <sup>S.A.W.S</sup> death, but They<sup>R.A</sup> did start it from His <sup>S.A.W.S</sup> arrival to Madina.)

### Mother of Knowledges in Mother of Books(أم العلوم من أم الكتب):

Mathematics is known as mother of all worldly knowledges as it does estimates and involves every information. Qur'an is base of all other Godly books, since it is like all in one. Basically mathematics is also a Godly knowledge which has emerged out of these heavenly instructions of Allah almightly. Quran is a complete code of instructions while mathematics is a total of

illustrations, measures and calculations. Quran gives concepts of path in worldly life with all its seen and unseen ultimations followed by an after life world. Mathematics clears and declares the perceptives of all followed by all possible parameters according to Allah's will. So, a single verse or subject is not free of mathematics. Many estimates are according to human knowledge but many beyond of his calculative and determinative approach because most macros and very minutes are out of his intellectual. As most of worldly acts are well understood by humans but certain do not agree his thinking, like personality of Allah almightly; his prophets of their appointment criterions; the Mi'raj (Ascension); angles alon with their shapes, bodies and activities; jinns, their living, presence and habitation; gravelife settings, concepts, door of heaven or window to the hell; judgement day and its background, circumstances, duration; Godly balance to weigh the wordly human deeds, hell and heaven, and all such things are of Allah's own mathematics, out of human approach.

#### 1. Parameters for use of Mathematical Sciences in Oura'nic Research

In past all Qur'anic and mathematical work was in the hands of muslim scholars and they were well oriented of Islamic teachings but with the passage of time science and mathematical sciences got reached in the hands of others who were unaware or misguided of Islamic teaching

Parameters and limits of seeing a new moon (crescent), using the latest science instrument facilities, should be determined, like all other Islamic practices, according to the instructions of holy Prophet<sup>S.A.W.S</sup> which is visible in the act of his companions (respected Sahaba<sup>R.A</sup>). Because all such found present while following the holy Prophet<sup>S.A.W.S</sup> of his holy teachings.

"Difference in moon seeing due to cloud is an extra factor which does not deviate lunar calendar. This difference may be removed by winess process. It can be understood by the example: moon if present at 18°, must be visible, but not possible due to cloudy. Sharia tells a soft solution for it that some solid witness may be provided from the adjoining area, believed positively, otherwise the past lunar month taken of 30 days." (86)

"Countries or cities situated at the same longitude are considered in the same lunar and sun plan."  $^{(87)}$ 

(We have seen you (O Muhammad), turning your face over and over again towards Heaven. Now, therefore, We turn you towards the giblah that you like best: so turn your face towards the Masjid Haram. Henceforth, wheresoever you may be, turn your face at prayer towards

it.146 The people who were given the Book know it well that the commandment (about the change of giblah) is in fact from their Lord, and is based on the Truth, but Allah is not unaware of what they are doing (in spite of this))<sup>35</sup>

"First of all, here used the word Masjid Haram instead of Kaba or Bait-Ullah, which is relatively a vast area. Then, for turning towards, the word ألف is used instead of إلَى which means direction or towards. So it means that an accurate turning towards Bat-Ullah is not necessary. Only a turning towards it or to gain its direction stays sufficient. All such things are to refine the belief that people may not think that the walls, door or building of Bat-Ullah are to be worshipped. And another purpose to create an ease for praying like essential, for rurals and far living people" (89)

"Otherwise it was just possible to determine Bait-Ullah accurately using mathematical calculations and Astrolabe. But the kind Prophet<sup>S.A.W.S</sup> avoided it, due to his high vision that Islamic worships mistaken for such purposes only. Moreover, all this was dependent of mathematics and instruments. A world spread Ummah, scattered in deserts and far rurals, was likely to face difficulty." <sup>(90)</sup>

"Same for lunar seeing that the origin, situation, presence with their minute details, may assert harms instead of benefits that someone may take such things as an ultimate goal of Sharia. Also the mark sign of Sharia, to create an ease for people." (91)

In short, any deviation of even slight level is not allowed in soul of Islamic teachings, originated from the Holy Qur'an. Any other worldly knowledge, even very helpful and essential for Qur'anic adaptation can not be sovereign and it must stay under the command of Qur'anions.

#### Conclusions:

- 1. Research need and appropriate related information about mutual pull between Qur'anic concept and mathematics is not new or strange thing.
- 2. Hence mathematics have emerged out of Qura'n, so it is also a part of Islamic teaching knowledge.
- 3. As Islamic law (Fiqh) makes its amending way for newly faced social disputes and problems, new methematical versions are created with some changed applications.

<sup>35</sup>Tafheemul Qur'an: English Tafseer of Holy Qur'an by ,Syed Abu ul A'ala Modudi<sup>R.E</sup>(www.biharanjuman.org/Quran/Tafseer-ul-Quran-English-pdff.htm) archived on 27-11-2020

- 4. No Qur'anic verse or topic without mathematical illustration, making it quite conceptual and practicable.
- 5. Mathematical relation in Qur'anic concept is as broad as Qur'an itself is. All Qur'anic orders and instructions require mathematical value for their practice.
- 6. All Islamic beliefs and basics are of mathematical logic, leaving no blind or dark path for their followers.
- 7. All prophets showed just calculative logics by names, qualities and degrees of excellence for oneness of Allah almighty (Toheed), competency of their prophethood, parametric requirements and pillars of perception. Hazrat Mohammad<sup>S.A.W.S</sup> last and true prophet, if one looses this belief, actually he looses his belief in authenticity and originality of Qur'an and ultimatly in Islam.
- 8. Mathematical sciences, statistics, algebra, astronomy, trigonometry, geometry, equations, biometry, chemometry, physiometry, econometry, psychometry, pharmometry, finance and banking, treasury affairs and so on, all are beneficial and helpful in Qur'anic practices but they can not be allowed to dominate the Qur'an. So, it is necessary to ensure their use within limits only under the command of Islamic scholars.
- 9. All mathematical versions of Qur'anic instructions should be prepared according to Qura'nic teachings, so that their real porpuse, to lead the life according to the will of Allah almighty and the way told by his last Prophet Hazrat Mohammad<sup>S.A.W.S</sup>, may be achieved successfully, would be the positive use of mathematical knowledge.
- 10. Wordly knowledge including all sciences and mathematics do not have such authentic level that they can stand against or in contrast with Godly knowledge, the Qur'an. Reason is that these comprise human acquired limited information which never prove totally true. At least one third of scientific knowledge becomes dead or replaceable after five to ten decades. So, it is appropriate to use it just for ease, help and assist purpose only. It can not lead independently, totally and fully. Qur'an and actual nature are homocentric.
- 11. A further probing study should be made to assess appropriate role, associative positive criterion and parametric limitations of mathematical sciences in Qur'anic commentaries.

#### References

- 1. Asrar Ahmad, Dr. (No Publishing Year), Ta'aruf Qur'an maa Azmat e Qur'an (Lahore: Maktaba Khauddam ul Qur'an), p. 40.
- 2. Surah Al-Isra (17): 12
- 3. Surah An-Nisa (04): 11
- 4. Zaka Ullah, Munshi. (1875), Usool-e-Ilam Hindsa maroof bah Tehreer Iqleedas, Sharah Maqala 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> (Allah Abad India: Mutba Murtazvi Dehli), p. 2, 18.

- 5. Al-Khwarzimi, Al-Sheikh Al-Ajal Ela Abdullah Mohammad Bin Musa. (1830), Al-Kitab Al-Mukhtasar fi Hisab Al-jabar wa Al-Muqabla (London: J. L. Cox), p. 3.
- 6. Ibn e Khuldoon, Allama Abdul Rehman. (1986), Muqadma Ibn e Khuldoon (Karachi: Nafees Academy), p. 380.
- 7. K. Bettinger, Alven. and A. Englund, John. (1963), Algebra and Trigonometry (Scranton Pennsylvania: International Textbook company), p. 273.
- 8. Al Barooni, Lil Hakeem Al Felsoof Al Kabeer wa Al Moarikh Al Falki Al Shaheer Abi Al Rehan. (1904), Kitab Al Qanoon Al Masoodi Part 1(Hydrabad Dakan Alhind: Daira Tul Maarif Al Usmania), p. 91.
- 9. Yasin Owadally, Mohammad. (2005), The Muslim Scientists (Kualalumpur, Malaysia: A.S. Noordeen), p. 1.
- 10. Yasin Owadally, Mohammad. (2005), The Muslim Scientists (Kualalumpur, Malaysia: A.S. Noordeen), p. 1.
- 11. Mohammad bin Ismail Bukhari<sup>R.A</sup>, (2004) Jamey Sahehi Bukhari vol.6 Kitab Fazail ul Qura'n, Bab khairo kum mn taala-mul-Qura'na wa allama hoo, Bab, He is best among you, who does learn and teach the Qura'n., Markazi Jameeat Ehl-e-Hadith Hind, p. 550.
- 12. Mohammad bin Ismail Bukhari<sup>R.A</sup>, (2004) Jamey Sahehi Bukhari vol.6 Kitab Fazail ul Qura'n, Bab khairo kum mn taala-mul-Qura'na wa allama hoo, Bab, He is best among you, who does learn and teach the Qura'n., Markazi Jameeat Ehl-e-Hadith Hind, p. 550.
- 13. Qasmi<sup>R.A</sup>, Molana Shoukat Ali. (2010), Islam ka Qanoon e Wirasat (Sawabi: Idara Furqan, 03329431106), (Retrieved on November 19, 2020 fromidarafurqanswabi@yahoo.com), p. 12.
- 14. Qasmi<sup>R.A</sup>, Molana Shoukat Ali. (2010), Islam ka Qanoon e Wirasat (Sawabi: Idara Furqan, 03329431106), (Retrieved on November 19, 2020 fromidarafurqanswabi@yahoo.com), p. 12, 13.
- 15. Surah Al-Nahal (16): 44
- 16. Surah Al-Najam (53): 3, 4
- 17. Mohammad Hifeez ur Rehman Seuharvi<sup>R.E</sup>, Molana. (2002),Qasas ul Qur'an vol. 1, 2, Tazkra Idrees<sup>E.S</sup> (Karachi: Dar ul Ashaat), p. 69.
- 18. Abdul Rehman Kailani, Molana. (2006), Islam ka Nizam e Falkiat (Lahore: Maktabah Al Salam), p. 16.
- 19. Fazal ur Reman Chishti, Agha. (2006), Ilam e Najoom and its philosophy (Lahore: Maktabah Al Salam), p. 16.
- <sup>20</sup>. Hazrat Allama Molana Abdul Mustafa Azmi<sup>R.E</sup>, Sheikh ul Hadith. (1425 H.), Ajaib ul Qur'an maa Ghraib ul Qur'an (Karachi: Maktabah Al Madina Bab Al Madina), p. 171.

- 21. Saif Ullah Rehmani, Molana Khalid. (2009), Rah-e-Amal (Karachi: Zam Zam Publishers), p. 153.
- 22. Awan, Noor Mohammad. (July to December 2009), Qur'an and Mathematics 1(Lahore: Jihat ul Islam Volume 3, No.1), p. 43.
- 23. Gary Miller, Dr. (1426 H), The Amazing Qur'an (Al Riaz, Suadia: Abu ul Qasim Publishing House), p. 49.
- 24. Yasin Owadally, Mohammad. (2005), The Muslim Scientists (Kualalumpur, Malaysia: A.S. Noordeen), p. 3, 4.
- 25. Zakria Wirk, Mohammad. (2004), Musalmanoon key Sciensi Karnamey (Ali Garh Muslim University Ali Garh, India: Markaz Farogh e Science), p. 20.
- 26. Al Khwarzimi, Al Sheikh Al Ajal Ela Abdullah Mohammad Bin Musa. (1830), Al-Kitab Al Mukhtasar fi Hisab Al Jabar wa Al Muqabla (London: J. L. Cox), p. 51.
- 27. Iqbal, Muzaffar. (2009), The Making of Islamic Science (Kaula Lumpur Malaysia: Islamic Book Trust IBT), p. 52.
- 28. Heeraldlium. Translator Jameel Naqvi (1934), Omar Khayyam (Retrived Octobar 12, 2020 from http://www.pdfbooksfree.pk,Sami-fcs@hotmail.com, 0321-6622350), p. 250.
- 29. Yasin Owadally, Mohammad. (2005), The Muslim Scientists (Kualalumpur, Malaysia: A.S. Noordeen), p. 3.
- 30. Iqbal, Muzaffar. (2009), The Making of Islamic Science (Kaula Lumpur Malaysia: Islamic Book Trust IBT), p. 52.
- 31. Heeraldlium. Translator Jameel Naqvi (1934), Omar Khayyam (Retrived Octobar 12, 2020 from http://www.pdfbooksfree.pk,Sami-fcs@hotmail.com, 0321-6622350), p. 250.
- 32. Yasin Owadally, Mohammad. (2005), The Muslim Scientists (Kualalumpur, Malaysia: A.S. Noordeen), p. 3.
- 33. Heeraldlium. Translator Jameel Naqvi (1934), Omar Khayyam (Retrived Octobar 12, 2020 from http://www.pdfbooksfree.pk,Sami-fcs@hotmail.com, 0321-6622350), p. 250, 251.
- 34. Yasin Owadally, Mohammad. (2005), The Muslim Scientists (Kualalumpur, Malaysia: A.S. Noordeen), p. 3, 4.
- 35. Al Mashriki, Allama Inayat Ullah Khan. (1997), Tazkra vol. 2 (Lahore: Al Tazkra Publications), p. 20.
- 36. Boyer, Carl B. (1968), A History of Mathematics (New York London Sydney: John Wiley & Sons. Inc.), p. 250.
- 37. Boyer, Carl B. (1968), A History of Mathematics (New York London Sydney: John Wiley & Sons. Inc.), p. 250.

- 38. Boyer, Carl B. (1968), A History of Mathematics (New York London Sydney: John Wiley & Sons. Inc.), p. 251.
- 39. Boyer, Carl B. (1968), A History of Mathematics (New York London Sydney: John Wiley & Sons. Inc.), p. 252.
- 40. Boyer, Carl B. (1968), A History of Mathematics (New York London Sydney: John Wiley & Sons. Inc.), p. 258.
- 41. Al-Mashriki, Allama Inayat Ullah Khan. (1993), Man's Destiny (Islamabad: Al Mashriqi Foundation), p. 27.
- 42. Al-Mashriki, Allama Inayat Ullah Khan. (1993), Man's Destiny (Islamabad: Al Mashriqi Foundation), p. 21.
- 43. Al-Mashriki, Allama Inayat Ullah Khan. (1993), Man's Destiny (Islamabad: Al Mashriqi Foundation), p. 22.23.
- 44. Al-Mashriki, Allama Inayat Ullah Khan. (1993), Man's Destiny (Islamabad: Al Mashriqi Foundation), p. 23.
- 45. Adil Kamal, Ahmad. (1428 H), Translation and amendment by Mohsan Farabi, Itlas Fatoohat e Islamia (Al Riaz Suadia: Maktaba Dar us Salam), p. 65.
- 46. Al-Mashriki, Allama Inayat Ullah Khan. (1993), Man's Destiny (Islamabad: Al Mashriqi Foundation), p. 28.
- 47. Shouqi Abu Khalil, Dr. (2001), Itlas Al Qur'an (Lahore: Dar us Salam Lil Kataba tul Rehmania), p. 243.
- 48. Shouqi Abu Khalil, Dr. (2001), Itlas Al Qur'an (Lahore: Dar us Salam Lil Kataba tul Rehmania), p. 69.
- 49. Shouqi Abu Khalil, Dr. (2001), Itlas Al Qur'an (Lahore: Dar us Salam Lil Kataba tul Rehmania), p. 101.
- 50. Shouqi Abu Khalil, Dr. (2001), Itlas Al Qur'an (Lahore: Dar us Salam Lil Kataba tul Rehmania), p. 123.
- 51. Shouqi Abu Khalil, Dr. (2001), Itlas Al Qur'an (Lahore: Dar us Salam Lil Kataba tul Rehmania), p. 200.
- 52. Surah Al-An'am (6): 96
- 53. Surah Ar-Rahman (55): 5 to 9
- 54. Surah Al-Ma'arij (70): 1 to 7
- 55. Abu ul A'ala Modudi<sup>R.E</sup>, Syed. (2001), Deenyat (Lahore: Idara Tarjman ul Qur'an), p. 34.
- 56. Surah An-Nisa'a (4): 171
- 57. Surah Al-Mu'minun (23): 17, 18
- 58. Surah Hud (11): 40

- 59. Surah Ash-Shu'ara' (26): 112, 113
- 60. Surah Nuh (71): 4
- 61. Surah Al-Qasas (28): 29
- 62. Surah An-Naml (27): 12
- 63. Surah Al-Qamar (54): 1
- 64. Abu ul A'ala Modudi<sup>R.E</sup>,Syed. (1982), Tarjma Qur'an Majeed ma'a mukhtasar hawashi (Lahore: Idara Tarjman Al Qur'an), p. 1345.
- 65. Surah Al-Namal (27): 38 to 40
- 66. Surah Al-Imran (3): 130
- 67. Surah Luqman (31): 29
- 68. Surah Yunas (10): 5
- 69. Surah Al-Toba (9): 36
- 70. Surah Al-Inaam (6): 96, 97
- 71. SurahAl-Imran (3): 124, 125
- 72. Surah Al-Iraf (7): 34
- 73. Surah Al-Iraf (7): 142
- 74. Surah Al-Inaam (6): 98
- 75. Surah Al-Iraf (7): 130
- 76. Surah Al-Iraf (7): 135
- 77. Surah Al-Room (30): 8
- 78. Surah Luqman (31): 14
- 79. Surah LuQman (31): 34
- 80. Surah Al-Baqarah (2): 226
- 81. Surah Al-Baqarah (2): 228
- 82. Surah Al-Baqarah (2): 229
- 83. Saif Ullah Remani, Molana Khalid. (2008), Fiqh Islami Tadween wa Taaruf (Deve Band, District Seharan Pur U.P, India: Kutab Khana Naeemia), p. 62.
- 84. Nazar Mohammad, Chohadri. (1994), Ehkam ul Qura'n (Lahore: Service Industries Limited), p. 25.
- 85. Bukhari, Imam Abu Abdullah Mohammad bin Ismail. (1990), Taisar ul Bari Sharah Sahi Bukhari, Trans: Allama Waheed uz Zaman, Kitab 15th Para, Chapter 459 Al Tareikh (Lahore: Zia Ehsan Publishers), p. 682.
- 86. Abdul Rehman Kailani, Molana. (2006), Islam ka Nizam e Falkiat (Lahore: Maktaba-Tul-Islam), p. 64.

- 87. Abdul Rehman Kailani, Molana. (2006), Islam ka Nizam e Falkiat (Lahore: Maktaba-Tul-Islam), p. 64, 65.
- 88. Surah Al-Baqarah (2): 44
- 89. Mohammad Shaffi Sahib, Hazrat Molana. Mufti-E-Azam Pakistan. (1380 H) Rooyat-E-Hilal (Karachi: Idara-Tul-Maarif), P. 22, 23.
- 90. Mohammad Shaffi Sahib, Hazrat Molana. Mufti-E-Azam Pakistan. (1380 H) Rooyat-E-Hilal (Karachi: Idara-Tul-Maarif), P. 23.
- 91. Mohammad Shaffi Sahib, Hazrat Molana. Mufti-E-Azam Pakistan. (1380 H) Rooyat-E-Hilal (Karachi: Idara-Tul-Maarif), P. 23.