

Newton's missing apology: a reconstruction

“There is yet another argument for a Deity which I take to be a very strong one, but till principles on which tis grounded be better received I think it more advisable to let it sleep.”

[Isaac Newton, in a letter to Richard Bentley, Dec. 1692]

Introduction

Robert Boyle – philosopher, and a father of modern chemistry – died in the winter of 1691 leaving in his will an endowment for a series of lectures to defend religion from atheism. A year later, the first of these was delivered by the young theologian Richard Bentley who drew heavily upon Newton's *Principia* for their content. However, being uncertain on a number of points, before publication he sought help from the great man, and over the next few weeks received four letters from him.

The first of these begins “When I wrote my treatise about our Systeme (the *Principia*) I had an eye upon such Principles as might work with considering men for the belief of a Deity and nothing can rejoice me more than to find it usefull for that purpose.” In other words, he was most happy that people were responding to his arguments from nature for belief in God. The same letter ends, intriguingly, with the quotation given above and the reader is left wondering what other form of evidence could be described as ‘very strong’. It has been suggested that Newton is here referring to his work on prophecy and the fact (as he sees it) that events over the past millennium-and-a-half are accomplishments of prophecies outlined in the images of Daniel and Revelation. However, something more objective appears to be implied – though this is not to be found among Newton's theological papers (now available online at www.newtonproject.sussex.ac.uk) and the assumption must be that it is lost – possibly, even destroyed by Newton himself, or another.

The purpose of this essay is to attempt a reconstruction of the essential content of this ‘sleeping’ argument by applying the perceived logic of one who sought truth in all he encountered, was meticulously diligent in all he did (as abundantly revealed in his scientific work), had a deep knowledge of the Judeo-Christian Scriptures (understanding these to hold a ‘key’ with which he might unlock the additional information he believed was contained therein) and was interested in Jewish mysticism. Thus, with a mind open to a detailed examination of any feature that holds the promise of fulfilling Newton's expectations, we proceed.

An obvious starting point

For the unencumbered believer who desires wisdom (as did Newton), a particular verse in the Bible's final Book promises to lead to deeper things:

“Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of (a) man; and his number is 666.” [Revelation 13:18]

The mathematician in Newton must have rejoiced to find such a number given as a 'surface feature' of the biblical text; he would surely have subjected it to close scrutiny and found it to be *triangular*, and *a multiple of 37* – both significant features of a possible 'key' for the following reasons:

666 may be portrayed as a symmetrical formation of uniform circular counters – thus meeting the 'counting' requirement:

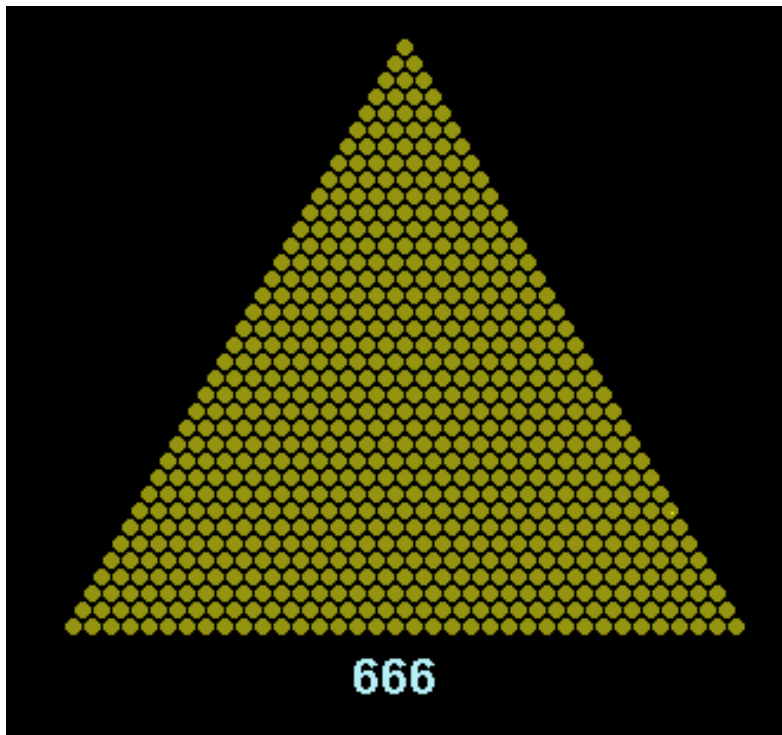


Figure 1: A view of 666 as 36th triangular number

Observe that proceeding row by row, from top to bottom, we encounter 1, 2, 3, ..., 35, 36 counters. The fact that a number has thus been transformed into a picture would undoubtedly have caught Newton's attention; it is likely that he would have included this feature of 'numerical geometry' in his listing of the characteristics of his emerging 'key'.

In his contemplation of this picture, he would surely have become aware of those additional features of 666 which make it unique in the triangular number series; namely, that all its numerical attributes are triangular (Figure 2). At the same time, he would have realised that 10 – 'base' or 'radix' of our number system - is also triangular, and that this accounted for the pleasing 'repdigit' (i.e. repeated digit) form of '666'.

Regarding 37 – highest prime factor of 666 – it is unlikely that he would have missed the fact that, expressed as a symmetrical group of counters, 37 may be realised pictorially in any one of three ways (Figure 3). It is the most symmetrical of all prime numbers; and in this regard it is, undoubtedly, unique.

These are 'rich pickings', indeed – and achieved with the minimum of effort. But there is one further attribute of the 'key': the verse suggests that to acquire wisdom words are to be read as numbers! Newton would already have been familiar with this feature of Jewish mysticism.

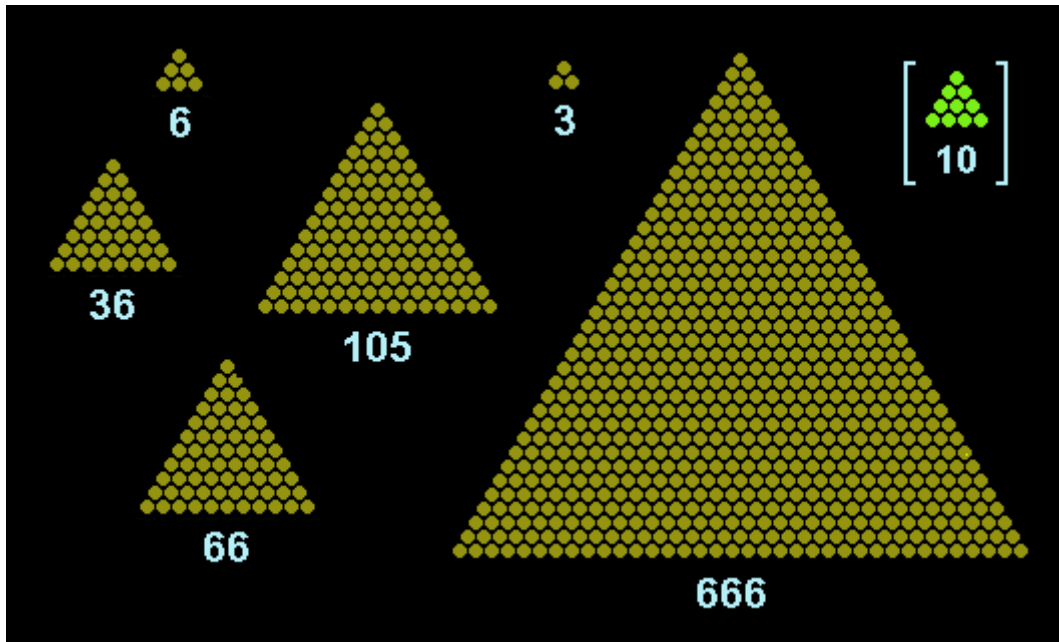


Figure 2: The triangular attributes of 666-as-triangle

6 – the repeated digit in '666'

66 – seen in the string '666'

36 – the number of counters forming a side

105 – total counters in the outline

3 – the number of sides

Remarkably, the sum of these attributes of 666 is 216, or 6.6.6!

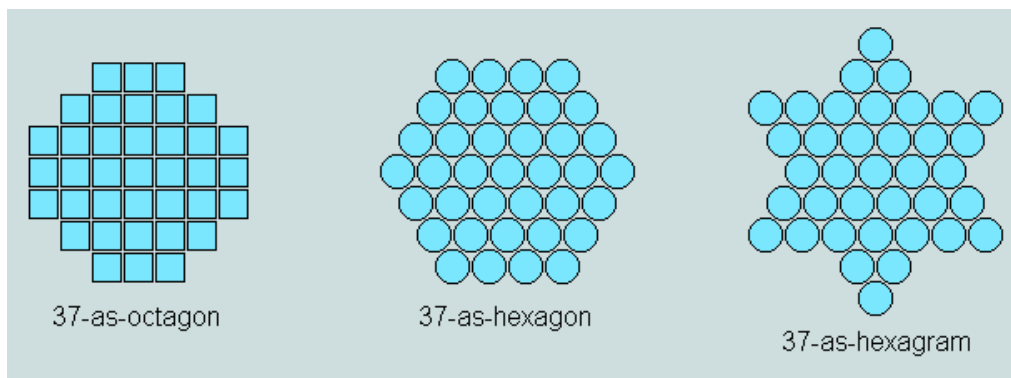


Figure 3: the uniquely-symmetrical prime 37

Summarising the attributes of the ‘key’ provided by Revelation 13:18, Newton would therefore very likely have

- the unique prime, 37 and its multiple, 666 – unique triangular number;
- the cube, 216, or 6.6.6 – sum of the triangular attributes of 666;
- symmetrical ‘number pictures’ based on the principles of numerical geometry – and, principally in this regard, the equilateral triangle ;
- the concept and validity of reading Greek and Hebrew words as numbers.

But, does this key fit an existing lock?

One who believes the Bible to be a coded text must surely expect evidence of the fact to appear at or near the beginning of the Book. It is therefore reasonable to assume that Newton would have spent some considerable time examining the structure of its opening Hebrew words/numbers – particularly the 7 of its first verse (which takes the form of the powerful assertion “In the beginning God created the heaven and the earth.”) Here is what he would have seen (his knowledge of Hebrew enabling him to fill in the numbers):

GENESIS 1:1&							
8	7	6	5	4	3	2	1
וְהָאָרֶץ	: הָאָרֶץ	וְאֵת	הַשָּׁמַיִם	אֵת	אֱלֹהִים	בָּרָא	בְּרֵאשִׁית
earth the And	.earth the	and	heaven the	*	God	created	beginning the In
302	296	407	395	401	86	203	913

Figure 4: The first 8 words of the Hebrew Bible

Observe that the reading is from right to left. Each group of letters – normally understood to be a word - may also be fairly read as the number obtained by summing the numerical values of its letters (see Appendix for the Hebrew scheme of alphabetic numeration introduced ca.200 BC) and here referred to as the ‘characteristic value’, or CV, of the word.

Faced with this situation, having now a ‘key’ and believing there to be more information to be tapped, Newton would very likely have proceeded to determine the numerical value of the first verse by summing the CVs of words 1-7; assuming this to be so, he would have found the result, 2701, to be a numerical triangle possessing an outline of 216, or 6.6.6, counters and factorising thus: $2701 = 37 \times 73$. Such a strong correlation between these features and the attributes of the ‘key’ as outlined above would surely then have stimulated his confidence in what he was about, and it would be fair to further assume that Newton went on to discover that the first 5 CVs total 1998, or 3×666 ; that $(6 + 7)$ total 703 (the triangle that, when inverted, fits the verse triangle precisely!); and that the last 5 of the eight opening words total 1801 (the hexagon representing the self-intersection of 2701-as-triangle!). Further, to cap it all, that the CVs of all eight words total 3003 – yet another triangular number! These results are summarised in Figure 5.

It is surely not beyond the bounds of possibility that Newton would have come upon these wonders and expressed them in words, along the following lines:

By adding together the numerical worth of each word (as based on the numeric value of each Hebrew letter) in certain unbroken sequences drawn from the first eight words of Genesis (i.e. the Bible's first verse and following word – here referred to as Genesis 1:1&), one uncovers strong evidence of intelligent design and purpose in the form of a symmetrical structure of coordinated numerical geometries (Figure 6).

Here are the elements of the numerical geometries spoken of above:

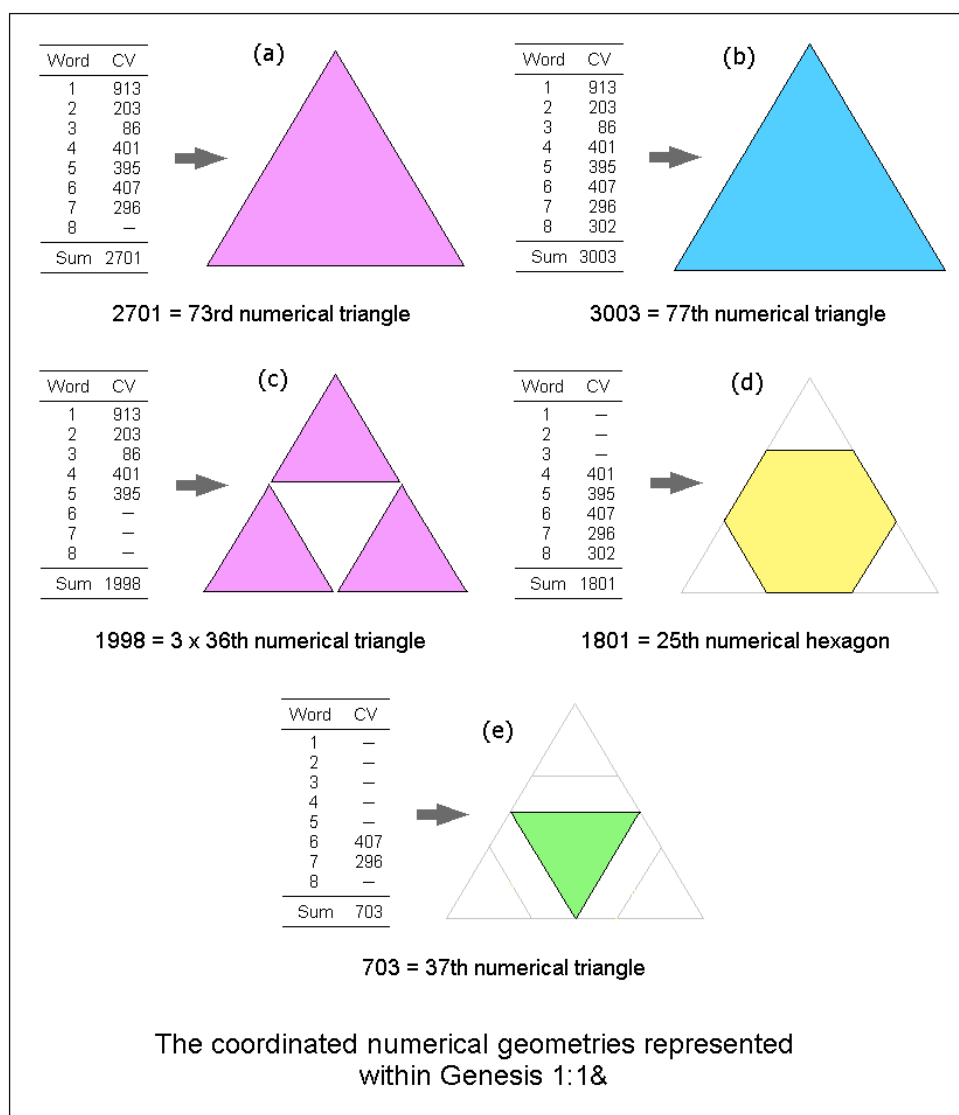


Figure 5

Observe that each comprises an unbroken sequence of the CVs.

By overlaying these symmetrical structures, Newton would have obtained the composite structure represented below (Figure 6), and realised that whilst the ingenuity demanded of such an exercise is itself immense, the fact that its author had knowledge of the required scheme of alphabetic numeration many centuries *before* it appeared to the human eye proves the matter to be extraordinary – and, in purely human terms, impossible.

Here, indeed, is another argument for a Deity which is very strong – indeed, irresistible!!

But what of the necessary ‘grounding’ that Newton reckoned was missing – even among his learned companions?

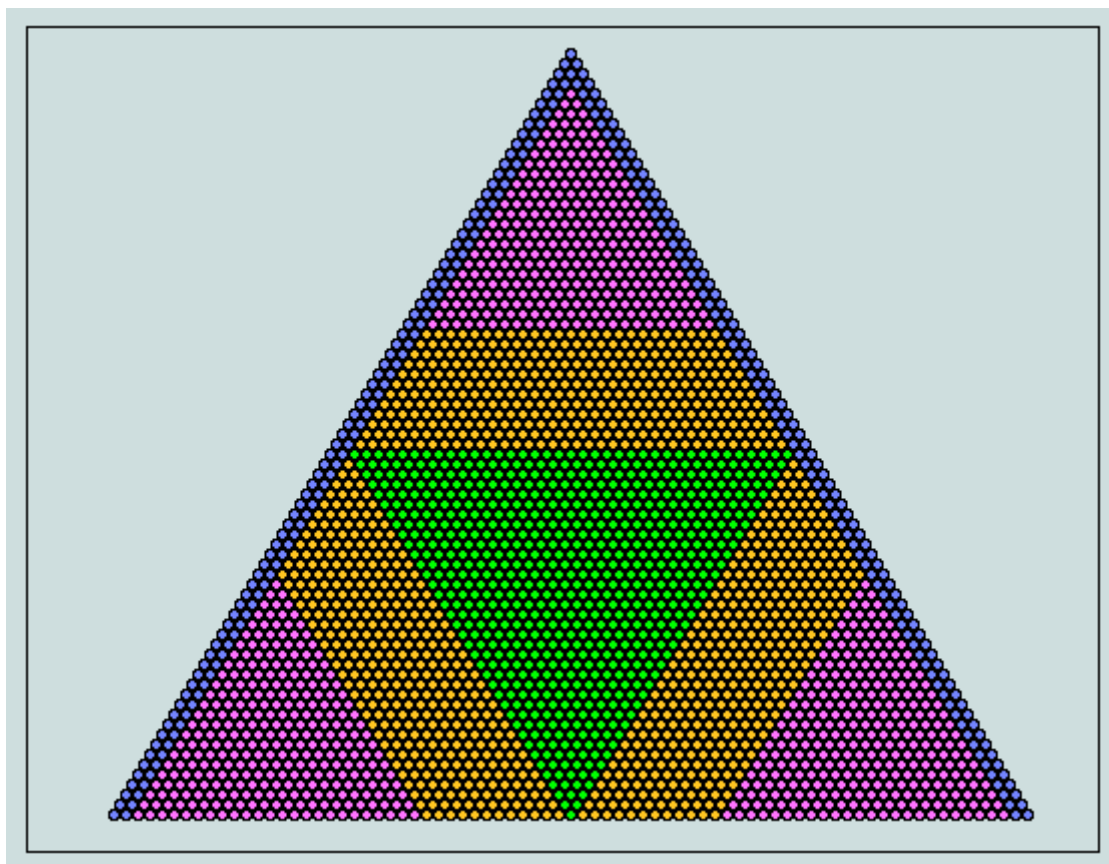


Figure 6: the symmetrical structure associated with the 8 opening words of the Hebrew Scriptures

Clearly, before the foregoing diagrams can evoke a positive response there is much groundwork to cover. Thus, it may be that the layman is unacquainted with certain relevant facts – as, for example

1. That the Judeo-Christian Bible is a collection of writings based largely upon translations from the original Hebrew and Greek – dating from the time of Moses (Pentateuch, c.1300 BC) and the 1st century AD, respectively.

2. That alphabetic numeration (the *Roman* system already familiar to many) extended to both Hebrew and Greek where complete alphabets were requisitioned for use as numbers .
3. That, in essence, the Bible – as well as being meaningful narrative - may also be fairly regarded as a large set of numbers.
4. That this Book contains hints of an ability to defend itself against the assaults of its enemies – it would be logical therefore to expect evidence of this anticipated fact to appear at the very beginning of the Book.
5. That whole numbers may be represented as sets of uniform counters (typically, coins of the same denomination, or marbles).
6. That certain numbers may be expressed in one or more ways as regular 2-D or 3-D patterns of counters.

Particularly worthy of further mention is the fact that the foregoing structure of numerical geometries incorporates the first three triangular multiples of 37 (itself a uniquely symmetrical number and, with its digit reflection, 73, a factor of 2701 – CV of the first verse). As demonstrated earlier, these triangular multiples form the following substructure [i.e. the overlay of (e) on (a) above] representing Genesis 1:1 – the Bible’s first verse:

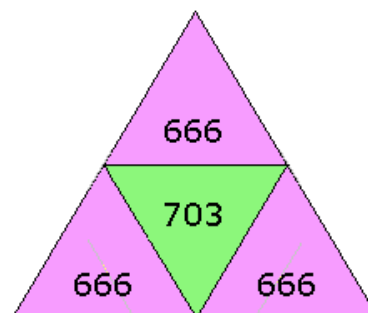


Figure 7: the symbolic nature of the Bible’s first verse

It is now seen to portray 703 (‘and the earth’) surrounded and menaced by 666 – number of the beast (see Revelation 13:18) and ‘key to wisdom’. The symbolism is striking – as Newton would have realised - and difficult to explain away as yet another random feature of the opening Hebrew words. Appropriate therefore to observe again that the outline of 2701-as-triangle comprises 216, or 6.6.6 counters.

A suggested sequel

With his scriptural expectations now fully vindicated, rather than declare the fact openly – and thereby risk losing both job and reputation as a scientist – Newton chose silence as the sensible option. However, other considerations might have included

1. an awareness that in his major work, the *Principia*, he had already made substantial - even *decisive* - contributions to the field of Christian apologetics.
2. as one who espoused monotheism the frequent appearance of the equilateral triangle (a symbol of the Trinity) in the proceedings may have disturbed him and shaken his confidence.

Conclusion

I believe it reasonable to assume that Newton discovered these self-evident truths, and committed them to paper. But where are these documents now? Perhaps, just lost; more likely, deliberately destroyed – since, for many, their content can hardly be described as welcome news! Perhaps they still exist and are destined eventually to appear in the public domain. However, what really matters is that their message no longer slumbers! It is awake and potent, and ready to bring down the claims of our current crop of campaigning atheists – and much else!

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APPENDIX - The Hebrew Scheme of Alphabetic Numeration

A significant feature of the Christian scriptures - though hardly ever referred to by theologians - is that all translations rest upon Hebrew, Aramaic and Greek originals whose letters and words may also be fairly read as numbers. Evidences of these yesteryear *alphabetic numbering systems* confront us still - as, for example, on the dials of many townhall clocks and in the verse and chapter numberings of some of the older books on our shelves.

What distinguishes the Hebrew/Aramaic and Greek systems from the Roman are, (a) *all* (not just the seven: I, V, X, L, C, D and M) alphabetic characters were requisitioned for use as numerals and, (b) the value represented by a string of letters was the simple sum of its constituent parts. Clearly, wherever found, the words of Hebrew, Aramaic and Greek are thereby firmly (and unavoidably) linked with discrete numbers; and though such words may, from time to time, be "interpreted" so as to mean something different from what their author intended, it is clear that the number upon which each rests is unchanging.

Believing that the words of the Scriptures were authored by God himself it is but a short step to believe also that the numbers we now find indelibly linked with these words were also contrived by him. It follows that Paul's Spirit-led teaching, "All scripture is given by

inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness..." (2Tm.3:16), must encompass these numbers also together with any information they may be found to contain.

In the following section the term *characteristic value* (CV) is used to describe the number obtained by summing the letter-values of a word or portion of text.

The Hebrew/Aramaic scheme of alphabetic numeration

Place:	1	2	3	4	5	6	7	8	9
Letter:	א	ב	ג	ד	ה	ו	ז	ח	ט
Value:	1	2	3	4	5	6	7	8	9
Place:	10	11	12	13	14	15	16	17	18
Letter:	י	כ	ל	מ	נ	ס	ע	פ	צ
Value:	10	20	30	40	50	60	70	80	90
Place:	19	20	21	22					
Letter:	ק	ר	ש	ת					
Value:	100	200	300	400					

This scheme dates from ca.200 BC. Of the 22 letters, 5 are observed to have alternative *end-forms*. The first Bible verse to display a numerical structure of interest is Genesis 1:1 - comprising the first 7 of the Torah's 68,504 Hebrew words! Here are the details:

GENESIS 1:1						
7	6	5	4	3	2	1
200 90	400 100	300 40 40	400 100	30 10 40	200 200	200 300 100
אָרֶץ	וְאֵת	הַשָּׁמַיִם	אֵת	אֱלֹהִים	בָּרָא	בְּרֵאשִׁית
. earth the	and	heaven the	*	God	created	beginning the In
296	407	395	401	86	203	913

The numerical expression of Genesis 1:1

Reading from right to left we find the 28 individual letter-values inscribed above the words of the text, and their respective sums (the CVs) below. Observe that the untranslatable 4th word indicates that the following noun is the definite and direct object of the transitive verb. This appears again in the latter part of word 6. The verse total (sum of the 7 CVs) is 2701.

ADDENDUM – The *Star of David* as a metaphor

The Star of David, known in Hebrew as the **Shield of David** or **Magen David** is a generally recognised symbol of Jewish identity and Judaism. Its shape is that of a hexagram, the union of two equilateral triangles; its core takes the form of a hexagon – the intersection of the same triangles. This figure has been in use as a symbol of Judaism since the 17th century – and even longer, as a title of the God of Israel.



Figure 8: the symbol representing the country of Israel and its people

These things being so, it is a remarkable fact that the reflective prime factors of 2701 (the sum of the 7 word CVs of the Hebrew Bible's first verse, Genesis 1:1) may take the form of a hexagram with hexagon symmetrically inscribed – the structure depicted at (a) below>

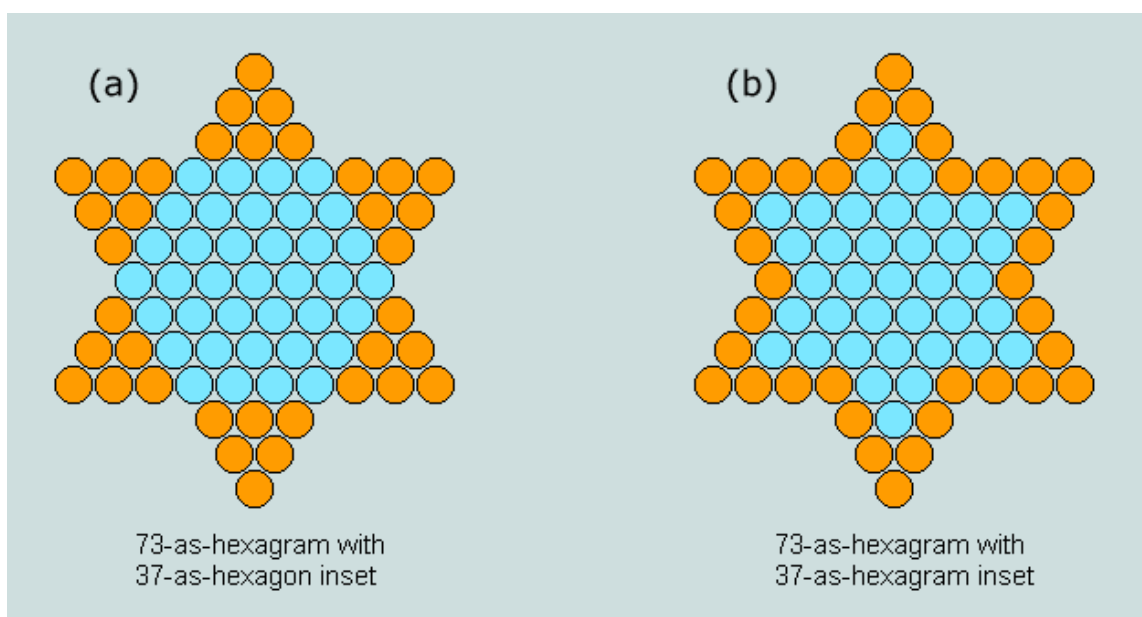


Figure 9

Alternatively, (because 37 has 3 symmetrical forms – see Figure 3) the combination may take the form shown at (b). And this leads naturally to a portrayal of Genesis 1:1 as a ‘star of stars’, thus

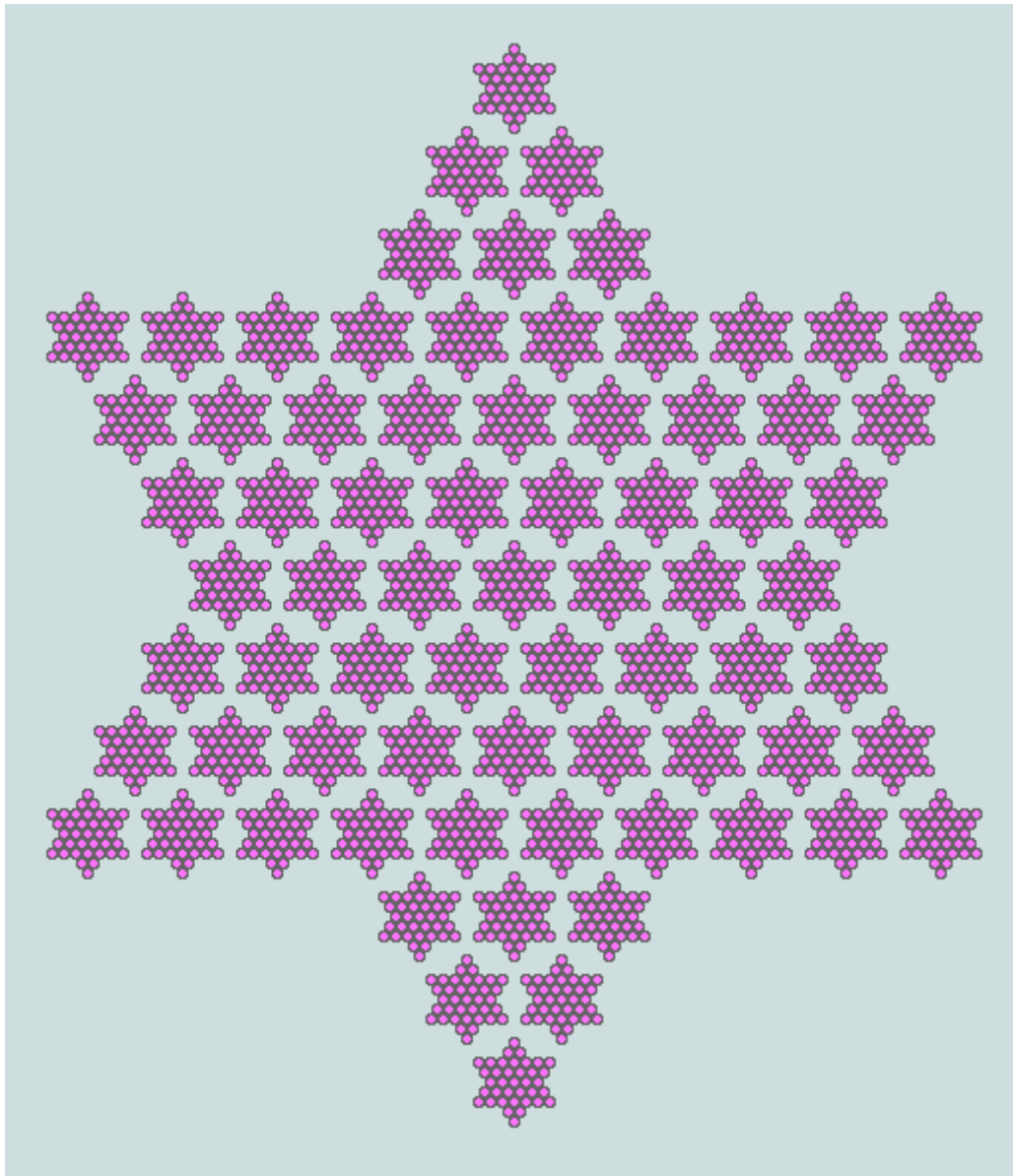


Figure 10: the Bible’s opening verse as a compound hexagram

Observe here that each of the hexagram units (coloured red), comprises 37 counters; and that 73 of these are required to construct the large hexagram.

Since the CVs of two Hebrew words translated “and the earth” total 703 (= 19x37), they may be represented by the centrally placed hexagon (coloured green) thus:

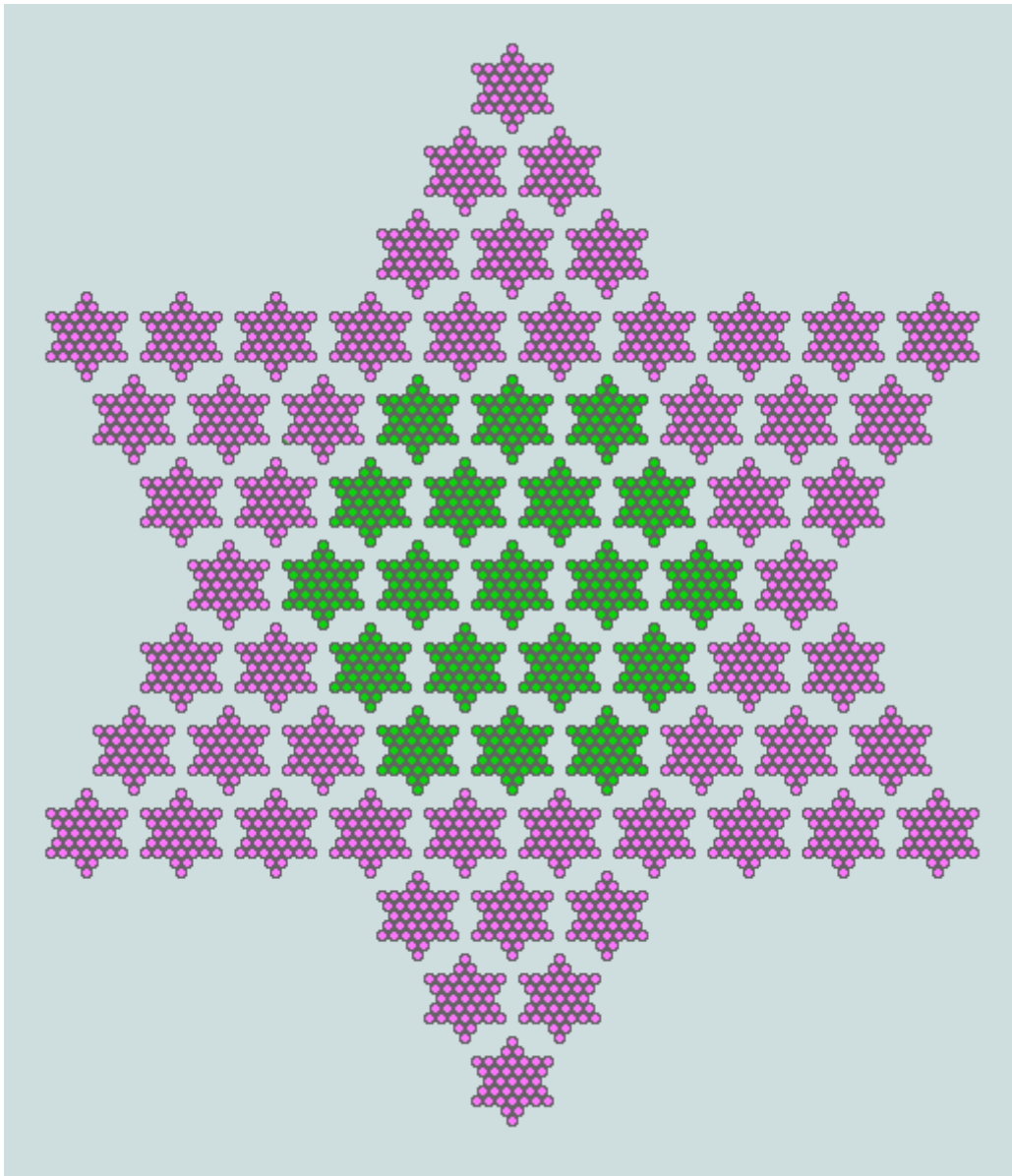


Figure 11: “and the earth” – the centre of God’s affections

Finally, let us observe that the CV of ‘Israel’ (541) has the form of its National Emblem, thus:



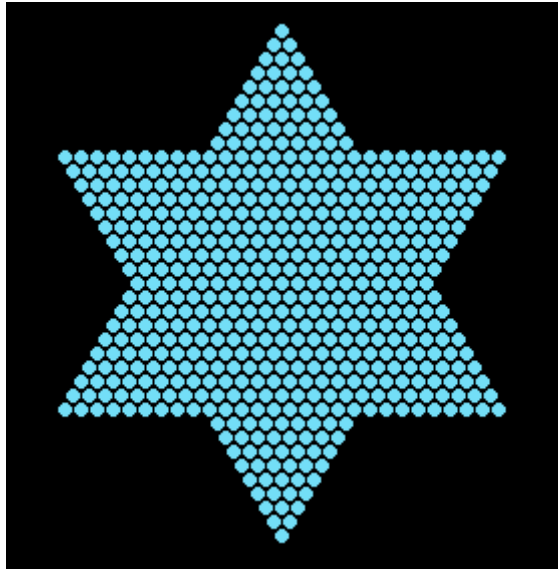


Figure 12: 541 as a numerical hexagram

Observe that this hexagram comprises 37 rows of counters.

Isaac Newton may well have gone on to uncover these additional wonders – but we have no evidence that he did.

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