## WISDOM'S KEY:

## An examination of 666 as a number per se


#### Abstract

As was revealed in the author's earlier paper 'The Ultimate Assertion: Evidence of Supernatural Design in the Divine Prologue ${ }^{(1)}$, the Bible's opening Hebrew words conceal an ingenious, divinelydevised Cryptogram; we may therefore infer that He who in the beginning spoke all things into being simultaneously laid the foundation for a series of symmetrical digital pictures to appear in our day pictures that would reveal His Being and Sovereignty, confirm the words of Genesis 1:1 and indeed, of the whole of His Word to man. In this paper we pick up the account as viewed from the Bible's final Book, Revelation.


## PART 1 - The Background

### 1.1 Introduction

A growing feature of life today concerns the appearance of the number 666 in all kinds of places ranging from barcodes, product names, political groups, logos, hand signs and other aspects of advertising or graphics. Sometimes the use of the number is immediately obvious, but in other instances it is stylistically hidden within clever graphic designs, or is encoded within words or phrases. What can be the reason for this burgeoning display of interest in 666? It is the express purpose of this paper to shed some light on the matter and - by drawing attention to the remarkable properties of this number - reveal the significance of its choice as a numerical marker within the biblical text.

### 1.2 A riddle in focus

'Six hundred threescore and six' (as the KJV ${ }^{(2)}$ has it) has long been respected as an object of dark mystery. This stems mainly from its specific mention in the Bible's $66^{\text {th }}$ and final Book Revelation - authored by God, and written by the Apostle John towards the end of the first century. It is there presented as the key to an intriguing 'riddle' - one set in the broader context of a time of extreme unbelief and apostasy and of world domination by 'the beast' (or Antichrist). Here is how the KJV renders the Greek of this verse:
"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 Six hundred threescore and six." (Rv.13:18)

As a reading of the opening words of the Book of Revelation confirms, (a) it is God who has chosen 666 as a tag for the beast, (b) it is He (God) who poses the riddle, (c) it is He who offers wisdom to him who solves the riddle and, (d) its solution appears intended to further some significant purpose - the words of Rv.22:19 and the imperative of the riddle itself making this abundantly clear.
(1) Academia.edu
(2) The King James' Authorised Version of the Bible

At first sight, the problem appears to consist in foretelling a man's name. However, if this really is the nub of the matter, why is it fraught with problems? For example, such a procedure would require that there be in place a widely accepted and workable system of alphabetic numeration. While this would have been true when the words of Revelation were first written (the widespread use of_Greek and Hebrew letters as numerals providing a natural basis for such a conversion), it is no longer so - unless, of course, we are intended to confine our attention to Greek and Hebrew names only. But, even then, it is hard to see a definitive solution emerging, and we are left with the question that should, perhaps, have been asked at the outset: What serious purpose is likely to be served by identifying beforehand an individual whose name bears this number? Clearly, there are likely to be many potential candidates; and a mere guess would hardly offer meaningful input into a rewriting of the prophecy of Revelation 13!

A direct approach to the riddle seemingly destined to fail, we therefore look for the 'understanding' required of the investigator. Because the Greek language has no indefinite article, the Greek word $\alpha \nu \theta \rho \omega \pi \sigma v$ may be equally translated, "of a man" or "of man". Hence we find "...number of a man." rendered elsewhere as, "...man's number", or "...number of humanity" - which, though disposing of some of the problems noted above, offer little more in the way of positive assistance. However, the alert reader will be already aware of one clue as to what the riddle's solution might involve, viz. the reading of the original Greek and Hebrew words and word sequences of the Scriptures as numbers! But before this is considered there is a basic matter to be settled.

### 1.3 On the correct reading of Revelation 13:18

Doubts continue to be expressed in some quarters concerning our proper understanding of the 'number of the beast'. Is it 666 or 616? Apparently, both appear as possible candidates in the early Greek manuscripts. A background to the matter is provided in God's Word (Revelation 1:11, 2:8-11). Concerning the dissemination of his vision among the Christian communities of the day, John was instructed as follows: "...What thou seest, write in a book and send it unto the seven churches which are in Asia; unto Ephesus, ... Smyrna, ...Pergamos, ...Thyatira, ...Sardis, ...Philadelphia, and ...Laodicea." We may safely conclude therefore that copies of the book in John's own hand (or of another under his direct supervision) would ultimately have appeared in the libraries of these seven churches - and, in particular, at Smyrna where Polycarp (69-155), a former disciple of John, was bishop. Thus, Irenaeus (first half of 2nd century), a native of Smyrna, disciple of Polycarp and future Bishop of Lyon, would have had ready access to this document, and the opportunity to discuss and clarify its contents with Polycarp.

Even in the second century there was some confusion about the true 'number of the beast' and, in his later writings, Irenaeus addresses this important matter as follows: "... this number (666) being found in all the most approved and ancient copies (of the Apocalypse) and those men who saw John face to face bearing their testimony (to it) ... I do not know how it is that some have ...vitiated the middle number in the name, deducting the amount of fifty from it ... (I am inclined to think
that this has occurred through the fault of the copyists ...)." - Irenaeus, Against Heresies, v.xxx. Accordingly, generations of scholars involved in the study and translation of the Greek originals have clearly understood the true value to be 666 otherwise, why would this number unfailingly appear in the text proper and 616, if at all, in a footnote? Again, the evaluation of 'Jesus', the Christ, from the Greek (nominative case) is $888{ }^{(3)}$; hence, that of the Antichrist is more likely to be the counterfeit lookalike 666 than 616. Further, 666 possesses significant scriptural and numerical features not shared by 616.

### 1.4 On the pivotal nature of Revelation 13:18

As investigations have proceeded over the years, it has become increasingly obvious that Revelation 13:18 is a pivotal verse. Its much-neglected words (proceeding from the mouth of the Lord as is made clear from Rev.1:1-3) are highly informative - and this quite independently of what appears at first glance to be their prime purpose, viz. the identification of a particular individual - for consider:

1. He (the Lord) sanctions the reading of alphabetic characters as numbers;
2. these clearly are 'counting' numbers, i.e. positive integers;
3. the principle appears in an appropriate context, for both Hebrew and Greek (the languages of the Judeo-Christian Scriptures) are alphanumeric, i.e. their letters also function as numerals;
4. the specific number, 666, is given;
5. for the investigator, wisdom is the prize.

These strands of information are summarised in the following diagram:


Figure 1
(3) See The Ultimate Assertion... p. 11

### 1.5 On the matter of 'Wisdom'

We observe that 'wisdom' is offered to those who, with understanding ${ }^{(4)}$, proceed to put the foregoing principles into practice - the aim, ostensibly it seems, being to identify a person whose name could be fairly read as 666 . Interestingly, we find that 'wisdom' in the Hebrew is 'chokmah', thus:


## Figure 2

The word (read from right to left) has 4 letters. Above each letter is printed its ordinal position in the Hebrew alphabet; and below, its value as a numeral according to the scheme instituted $\mathrm{c} .200 \mathrm{BC}^{(5)}$ The associated sums are 37 and 73 , respectively. The first is a factor of both 666 and 888 ; and 73 is its digit reflection. As we have found, these numbers are also the factors of Genesis 1:1 when its words are read as numbers.

### 1.6 The other scriptural occurrences of 666

We observe that the Scriptures contain three more references to 666 - two occurring in parallel passages; significantly, these raise further questions about this number. Thus, in 1 Kings 10:14 and 2Chronicles 9:13 we read of the annual tribute of gold received by King Solomon; the specific figure, 666 talents, is quoted - yet we are also given to understand that this was just part of the total received. Why this sum should be singled out for special mention is not made clear. However, it is undoubtedly interesting that Solomon - the personification of worldly wisdom and expert at solving riddles - should be so linked with Revelation 13:18. Again, in Ezra 2:13 we learn that, following the Babylonian exile, 666 males of the sub-clan of Adonikam returned safely to Israel. But in a parallel passage (Nehemiah 7:18) the figure is given as 667 ! The discrepancy in book-keeping - though slight - seems designed to further engage our attention - as does the name Adonikam which means "my Lord has arisen".

### 1.7 The scriptural companions of 666

Our attention is also drawn to two further numbers that - like 666 - lie 'on the surface' of the biblical text, viz. 153 and 276 . These are explicitly and precisely given as the number of fishes caught in a net (John 21:11), and the number of souls saved
(4) Observe that the 'understandng' required of the observer will be made additionally apparent as we proceed.
(5) See The Ultimate Assertion... p. 3
from a shipwreck (Acts 27:37), respectively. Readers of the New Testament may readily confirm that its allusion to large numbers - exceeding 100, say - are comparatively rare, and that the bulk of those that do occur are either 'round' - i.e. end with one or more zeros, like 144,000 (Revelation 14:3) - and/or are approximate - e.g. 'about 5,000' (Matthew 14:21) - and/or are expressions of a measurement of some kind - e.g. ' 200 cubits' (John 21:8) - and therefore depend on time and place. Indeed, the only exceptions are 153, 276, and 666! This trio is further distinguished by the common theme 'out of the sea'; further, the fact that 'none were lost' links the first with the second; and 'observer standing on the seashore' links first with third.

### 1.8 The near neighbour

Another large number appears in close proximity to 666; it refers to a harrowing period of time - intriguingly, presented first as 1260 days (Rv.12:6); then as "a time, times, and half a time" (Rv.12:14; also Dn.12:7), i.e. three and a half years; and again as 42 months (Rv.13:5) - the two latter clearly relating to a 360 -day year and 30 -day month. What can possibly lie behind this interesting variety of expression? Is the reader's attention being purposely drawn to some significant matter concerning 1260 ? That this is the author's intention (rather than any idiosyncrasy on the part of the translator) may be readily confirmed from an examination of the underlying Greek text. So, if not intended to draw attention to 1260, this device is surely hard to explain. Clearly, the principal features of this number need to be examined.

### 1.9 The nature of a 'numerical victory'

A significant extension to Revelation 13:18 appears a little further on in the text where we read:

## "And I saw...them that had gotten the victory over the beast, and over his image... and over the number of his name..." (Rv.15:2)

What does it take to overcome a number - this number, in particular? We observe that to achieve success in any area of endeavour - be it military conflict or other - it is necessary that you first know your enemy. A reasonable strategy, therefore, appears to be the following:

- determine the features of 666 as a number per se
- consider the scriptural contexts in which further instances of 666 are found
- carefully examine all related numbers

Implementing these principles alone may not be sufficient to reveal the whole truth - but they must, surely, bring it closer and, at the same time, clarify the attendant matters of counting and understanding.

### 1.10 What makes 666 so special as a number per se?

Proceeding in this manner, we shall find that 666 per se is arguably the most attention-seeking of all numbers. To begin with, when expressed symbolically as a base-10 (denary) object in the usual manner, it takes the form of a repdigit - the repeated digit (notably, first perfect ${ }^{(6)}$ number) appearing three times!

Further, rotated through 180 degrees '666’ yields the repdigit ' 999 '. (Interestingly, the device 'www' with which most are today familiar relates directly to the numerical reading of the Hebrew 'ווו', i.e. three sixes - representing 6+6+6=18). ${ }^{(7)}$

But the bulk of the interest centres on its absolute qualities. These include the following:

1. 666 is a one-of-a-kind triangular number
2. Its components feature in a most remarkable 'magic square'
3. A second magic square confirms and extends this understanding
4. The unique $6 \times 6 \times 6$ cube has 6 'magic square' faces
5. Two 3-D figurate numbers $-36^{\text {th }}$ pyramid and $36^{\text {th }}$ tetrahedron - have triangular faces of 666
6. The $73^{\text {rd }}$ tetrahedron has faces which take the form of the Genesis $1: 1$ triangle ${ }^{(8)}$; it has an interesting core
7. It is related scripturally to two other triangular numbers, viz. 153 and 276
8. The foregoing features lead us to a new understanding of the Bible's first verse and Cryptogram
9. It is structurally related to its mystery neighbour 1260 - this, most notably involving the metric dimensions of an abundant modern artefact.
10. Read as angles (in degrees) $666,6.6 .6(=216), 6+6+6(=18), 6.6(=36)$ and 1260 figure in trigonometrical relationships that define, precisely, the 'golden number' 1.618033... - a universal constant

These features will now be examined in detail.
(6) A perfect number is one that equals the sum of its factors, including 1.6 is perfect because $1+2+3=6 ; 28$ is perfect because $1+2+4+7+14=28$
(7) For the Hebrew scheme of alphabetic numeration see The Ultimate Assertion... p. 3
(8) The Ultimate Assertion..., p. 6

## PART 2 - The Attributes of 666

### 2.1 666 as the Epitome of Triangularity

The following diagram appears in The Ultimate Assertion..., p.9; it reveals the fact that 666 is a triangular number; in other words 666, when expressed as a set of uniform circular counters laid out on a flat surface, may assume the form of an equilateral triangle having 36 counters along each side - this is designated $T_{36}$ and forms the centrepiece of Figure 3. However, the symmetrical appearance of 666 both as denary object and geometrical absolute - is further enhanced by the fact that all the numerical attributes of 666 -as-triangle are themselves triangular. This is made clear in the diagram:


Figure 3
Observe,

1. The bracketed 10 -as-triangle reminds us that the appearance of 666 as a repdigit is radix-dependent, i.e. it is a marked feature of its expression as a 'base 10', or denary, object.
2. However, this view we have of 666 looks beyond its attractive repetition of the first perfect number, for it is the sum of the row numbers named when counting to 36 , thus:

$$
666=1+2+3+\ldots+34+35+36 .
$$

Note that in this form 666 is readily countable, and so meets this requirement of the riddle.
3. An examination of this triangle reveals that each of its $3\left(=T_{2}\right)$ sides comprises $36\left(=6.6=T_{8}\right)$ counters, and its outline is $105\left(=T_{14}\right)$. Further, the symbol ' 666 ' itself reveals two more triangles, viz. $6\left(=T_{3}\right)$ and $66\left(=T_{11}\right)$. In other words, all the visual components of 666 -as-triangle are triangles, and their sum is

$$
3+6+36+66+105=216=6^{3}=6.6 .6
$$



Figure 4
Observe that this object is unique among the cubes because its volume is numerically equal to its superficial area; further, it has the form of 666!

From these observations, we deduce that 666 as a triangular number is unique - and worthy of the title epitome of triangularity; clearly, it is one-of-$a$-kind in the infinite series of natural numbers.
4. Of particular interest to what follows are three interesting subsets involving these attributes, viz.
(a) The four triangles followed by cube involving only the first perfect number, viz.

$$
6,6.6(=36), 66,666 \text { and } 6.6 .6
$$

(b) The following Template: depicting 10 (principal radix and collective unit) in a setting of the two first perfect numbers, 6 and 28, thus:


Figure 5

Here, observe that

- '666' is delineated by the satellite triangles
- the inner triangle ( $T_{4}=10$ ) has an order one more than each satellite
- the triangle of 28 may be united with an inverted copy of itself to yield a hexagram (or star) of 37 - the principal factor of 666 .
- within this figure, the intersection appears as a star of 13.


Figure 6
(c) we encounter two examples of the rare phenomenon that a number and its double are triangular; thus, $\mathrm{T}_{2} \times 2=\mathrm{T}_{3}$ (i.e. $3 \times 2=6$ ) and $\mathrm{T}_{14} \times 2=\mathrm{T}_{20}$ (i.e.

$$
105 \times 2=210)
$$

Attention was drawn earlier (\#1.7) to two numbers that - like 666 - lie 'on the surface' of the biblical text and are textually related, viz. 153 and 276. Interestingly, these also are triangular, viz. $\mathrm{T}_{17}$ and $\mathrm{T}_{23}$, respectively! But matters do not end there, for we find that these triangles are further related in a most subtle manner - the explanation launching us into a fascinating investigation, and fulfilment of the divine promise 'Here is Wisdom'].

### 2.2 Applying the Template

As the following diagrams reveal

1. Substituting ' $6.6^{\prime}$ ( $=36$ ) for the template ' 6 ', we obtain a triangle of 153 (= $\mathrm{T}_{17}$ ) - the number of fishes caught in a net; (Figure 7)
2. Substituting ' 66 ' for the template ' 6 ', we obtain $276\left(=T_{23}\right)$ - the number surviving a shipwreck; (Figure 8)
3. Substituting ' 666 ' for the template ' 6 ', we obtain 2701 as a structure involving the first three triangular multiples of 37, and representative of the Bible's 7 opening Hebrew words. (Figure 9)


Figure 7


Figure 8


Figure 9

### 2.2 666 as a Magic Square

In recreational mathematics, a magic square is an arrangement of distinct numbers (i.e., each number is used once), usually integers, in a square grid, where the numbers in each row, and in each column, and the numbers in the main diagonals, all add up to the same number, called the "magic constant.". Magic Squares have fascinated mankind throughout the ages

The following square array of the first 36 natural numbers (representing the row totals of 666 -as-triangle) is a delight to all interested in recreational maths. It marks out this number as exceptional in the field - and fully capable of making us wise. Observe that the magic constant in this case is 111 (or $3 \times 37$ ). (Fig.10)

Fig. 11 reveals the original square divided into four $3 \times 3$ squares with their totals. While the horizontal and vertical totals of the squares, as expected, are 333 (or $9 \times 37$ ), the diagonals are 296 (or $8 \times 37$ ) and 370 (or $10 \times 37$ ). The first is significant: it is the value of the $7^{\text {th }}$ word of Genesis 1:1 (translated 'earth') and common factor of the Lord's Name and Title.

Figure 12 depicts the original square divided into nine $2 \times 2$ squares with their totals, as before. Interestingly, both diagonals record 216 (or $6 \times 6 \times 6$ )!


Figure 10
$\left.\begin{array}{|c|c|c|c|c|c|}\hline 8 & 30 & 26 & 22 & 24 & 1 \\ \hline 2 & 34 & 18 & 28 & 12 & 17 \\ \hline 7 & 20 & 3 & 29 & 31 & 21 \\ \hline 25 & 4 & 23 & 15 & 9 & 35 \\ \hline 36 & 13 & 27 & 11 & 19 & 5 \\ \hline 33 & 10 & 14 & 6 & 16 & 32 \\ \hline\end{array} \quad \begin{array}{|cc|c|c|}\hline 148 & 185 \\ \hline 185 & 148 \\ \\ \hline \downarrow & \\ \hline\end{array}\right] 333$

Figure 11


Figure 12

The following diagram continues the symmetrical division of the original square. Area totals are colour-coded. Observe that each total is again a multiple of 37 (abundant factor of Genesis 1:1) , and the further occurrence of 296.

| 8 | 30 | 26 | 22 | 24 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 34 | 18 | 28 | 12 | 17 |
| 7 | 20 | 3 | 29 | 31 | 21 |
| 25 | 4 | 23 | 15 | 9 | 35 |
| 36 | 13 | 27 | 11 | 19 | 5 |
| 33 | 10 | 14 | 6 | 16 | 32 |
| $370 / 296$ |  |  |  |  |  |


| 8 | 30 | 26 | 22 | 24 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 34 | 18 | 28 | 12 | 17 |
| 7 | 20 | 3 | 29 | 31 | 21 |
| 25 | 4 | 23 | 15 | 9 | 35 |
| 36 | 13 | 27 | 11 | 19 | 5 |
| 33 | 10 | 14 | 6 | 16 | 32 |
| $74 / 296 / 296$ |  |  |  |  |  |


| 8 | 30 | 26 | 22 | 24 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 34 | 18 | 28 | 12 | 17 |
| 7 | 20 | 3 | 29 | 31 | 21 |
| 25 | 4 | 23 | 15 | 9 | 35 |
| 36 | 13 | 27 | 11 | 19 | 5 |
| 33 | 10 | 14 | 6 | 16 | 32 |
| $222 / 444$ |  |  |  |  |  |

Figure 13

Clearly, at this point it is appropriate that something more is said about 37. This number is of great interest in its own right, for it is prime and trifigurate - as the following diagram reveals:


Figure 14
Further, its digit reflection 73 is prime and figurate. The following reveals the remarkable affinity possessed by these numbers:


Figure 15

As explained in an earlier paper, this affinity becomes an essential element in the promised 'wisdom'.

To return to the matter in hand: in the following four copies of the $6 \times 6$ magic square observe that the 36 individual cells have been numbered sequentially thus, (a) row by row, left to right; (b) row by row, right to left; (c) column by column, left to right;
and (d), column by column, right to left. In all four arrangements the sum of the 36 products 'cell number x cell content' is the palindromic number 12321, or $111^{2}$ - i.e. the square of the magic constant, or $9 \times 37^{2}$.

| 8 | 30 | 26 | 22 | 24 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 34 | 18 | 28 | 12 | 17 |
| 7 | 20 | 3 | 29 | 31 | 21 |
| 195 | ${ }^{20} 4$ | 23 | 15 | 9 | ${ }^{24} 35$ |
| 36 | 13 | 27 | 11 | 19 | 5 |
| 33 | 10 | 14 | 6 | 16 | 32 |

(a)

| 8 | 30 | 26 | 22 | 24 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 34 | 18 | 28 | 12 | 17 |
| 7 | 20 | 3 | 29 | 31 | 21 |
| 25 | 4 | 23 | 15 | 9 | 35 |
| 36 | 13 | 27 | 11 | 19 | 5 |
| 33 | 10 | 14 | 6 | 16 | 32 |

(c)

| 8 | 30 | 26 | 22 | 24 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 34 | 18 | 28 | 12 | 17 |
| 7 | 20 | 3 | 29 | 31 | 21 |
| 25 | ${ }^{23} 4$ | 23 | 15 | 9 | 35 |
| 36 | 13 | 27 | 11 | 19 | 5 |
| 33 | 10 | 14 | 6 | 16 | 32 |

(b)

| 8 | 30 | 26 | 22 | 24 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 34 | 18 | 28 | 12 | 17 |
| 7 | 20 | 3 | 29 | 31 | 21 |
| 25 | 4 | 23 | 15 | 9 | 35 |
| 36 | 13 | 27 | 11 | 19 | 5 |
| 33 | 10 | 14 | 6 | 16 | 32 |

(d)

Figure 16

### 2.4 333 as a magic square

A smaller square comprising prime numbers only is a representation of 333 , or $1 / 2.666$; it has features in common with the earlier square, as may be seen:


Figure 17

### 2.5 The $\mathbf{3 6}^{\text {th }}$ Numerical Pyramid $\left(P_{36}\right)$

Turning now to the numerical PYRAMID ( $\mathrm{P}_{36}$ ) which possess triangular faces of 666 , we observe this to be the sum of the first 36 squares. [The accompanying diagram of 91 -as-pyramid illustrates the principle - the 'counters' in this case being uniform spheres]


Figure 18
This pyramid is depicted below - the shaded face comprising 666 counters.


Figure 19
To determine the number represented by a pyramid, the required formula is

$$
P_{n}=n \cdot(n+1) \cdot(2 n+1) / 6
$$

$$
\text { Thus, } P_{36}=36.37 .73 / 6=6.2701=16206
$$

This may be verified by squaring each term of the magic square, and adding, thus:
$\left.\begin{array}{|c|c|c|c|c|c|c|c|}\hline 64 & 900 & 676 & 484 & 576 & 1 & \longrightarrow & 2701 \\ \hline 4 & 1156 & 324 & 784 & 144 & 289 & \longrightarrow & 2701 \\ \hline 49 & 400 & 9 & 841 & 961 & 441 & \rightarrow 2701 \\ \hline 625 & 16 & 529 & 225 & 81 & 1225 & \longrightarrow & 2701 \\ \hline 1296 & 169 & 729 & 121 & 361 & 25 & \longrightarrow 2701 \\ \hline 1089 & 100 & 196 & 36 & 256 & 1024 & \longrightarrow 2701\end{array}\right]$

Figure 20
As may be seen, each row (the sum of six squares) delivers the total 2701, i.e. 37.73 - the $73^{\text {rd }}$ triangular number ( $3^{\text {rd }}$ triangular multiple of 37 ).

### 2.6 The $36^{\text {th }}$ Numerical Tetrahedron $\left(\mathrm{Q}_{36}\right)$

Likewise, the numerical TETRAHEDRON $\left(\mathrm{Q}_{36}\right)$ - which also has faces of 666 - may be seen as the sum of the first 36 triangular numbers.


Figure 21
The required formula in this case is

$$
Q_{n}=n \cdot(n+1) \cdot(n+2) / 6
$$

$$
\text { So that } Q_{36}=36.37 .38 / 6=12.703=8436
$$

This may be verified by replacing each term of the magic square with the triangle indexed by that term, and adding, thus:
$\left.\begin{array}{|c|c|c|c|c|c|c|}\hline 36 & 465 & 351 & 253 & 300 & 1 & \longrightarrow \\ \hline 3 & 595 & 171 & 406 & 78 & 153 & \rightarrow 1406 \\ \hline 28 & 210 & 6 & 435 & 496 & 231 & \longrightarrow 1406 \\ \hline 325 & 10 & 276 & 120 & 45 & 630 & \longrightarrow 1406 \\ \hline 666 & 91 & 378 & 66 & 190 & 15 & \longrightarrow 1406 \\ \hline 561 & 55 & 105 & 21 & 136 & 528 & \longrightarrow 1406 \\ \hline\end{array}\right]$

Figure 22
Clearly, each row (the sum of six triangles) delivers the total $1406=2.703$, i.e. twice the $37^{\text {th }}$ triangular number ( $2^{\text {nd }}$ triangular multiple of 37 ).

A particularly interesting outcome of these associations of 666 is the emergence of its two Genesis companion triangular multiples of 37, viz. 703 and 2701.

### 2.7 The $73^{\text {rd }}$ Numerical Tetrahedron $\left(Q_{73}\right)$

The Genesis 1:1 triangle (Figure 9) may be regarded as a face of $Q_{73}$. This may be depicted as a composite structure comprising a central numerical octahedron (or double pyramid) surmounted by 4 smaller tetrahedra. The following wire-frame diagram explains the structure:


Figure 23

At (a), the features of the octahedon are shown, and at (b) its position within the encompassing tetrahedron. Central to each face of the tetrahedron is the face of the inner $37^{\text {th }}$ octahedron, which is the $37^{\text {th }}$ triangular number, value 703 (sum of words 6 and 7 of Genesis 1:1). The smaller tetrahedra (viz. $Q_{36}$ ) we have met before.

For the octahedron, the required formula is

$$
O_{n}=n \cdot\left(2 n^{2}+1\right) / 3
$$

$$
\text { So that } \mathrm{O}_{37}=37 \cdot\left(2.37^{2}+1\right) / 3=37.2739 / 3=37.913=33781
$$

Observe here that the value represented by the octahedron is the product of 37 and the value of the first word of Genesis 1:1

For the large tetrahedron, the value is

$$
Q_{73}=73.74 .75 / 6=25.2701=67525
$$

Observe, this product has 2701 (value of Genesis 1:1) as factor. We may check this total be adding together its components, thus:

$$
Q_{73}=O_{37}+4 . Q_{36}=33781+4.8436=67525
$$

## $2.8 \quad 1260$ - Near neighbour of 666

The Scriptures themselves offer further evidence of the Lord's high regard for triangular numbers and, in particular, for 666 and its geometrical features (which at least goes some way towards explaining why he offers it to us as 'the key to wisdom') for another large number appears in its close proximity, and it is appropriate that we now give it some attention. It refers to a harrowing period of time - intriguingly presented first as 1260 days (Rv.12:6); then as "a time, times, and half a time" (Rv.12:14; also Dn.12:7), i.e. three and a half years; and again as 42 months (Rv.13:5) - the two latter clearly relating to a 360-day year and 30-day month.
To repeat our earlier question: What can possibly lie behind this interesting variety of expression? It appears that the reader's attention is being purposely drawn to some significant matter concerning 1260. If not intended, then this device is surely hard to explain. What, then, are the principal features of this number? And why might they be relevant in the current context?

Like 666, 1260 displays imposing geometries based on the triangle. It is rich in factors and, though not itself triangular, is the LCM (Least Common Multiple) of the first nine triangular numbers, viz. $1,3,6,10,15,21,28,36$ and 45 and multiple of a further three (105, 210 and 630). Observe that, of these, 36 and 105 are respectively side and outline of 666-as-triangle.

A further numero-geometrical link with its scriptural companion is displayed in the following diagram where 1260 is seen to be the sum of the two outer brown triangles of 630 that form a cradle for 666 -as-triangle.


Figure 23

666 and 1260 are also bound together by the metric dimensions of a particular rectangle, length, 297 mm and breadth, 210 mm - that rectangle represented by the well-known and used A4 sheet of trimmed paper, thus:


Figure 24

Depicted here is the numerical relationship between the biblically contiguous 666 and 1260 that is established using $8 \times \mathrm{A} 4$ sheets.

Observe: $6 \times 210-2 \times 297=1260-594=666$

But 1260 is also associated with a rare feature of numerical figuracy: in the series of natural numbers it immediately precedes 1261 which is both $15^{\text {th }}$ hexagram and $21^{\text {st }}$ hexagon, thus:


Figure 25
[Observe that a numerical hexagon comprises 6 congruent triangles, drawn from the general series, disposed about a single central counter; similarly, a numerical hexagram, 12 triangles; the triangles involved in these structures are 210 and 105.

There are just 2 numbers in the first 40,000 that possess both hexagon and star symmetries; they are 37 and 1261]

Clearly, if the central counters are omitted, each of these symmetrical figures represents 1260 . The day following this period is the $1261^{\text {st }}$ - a day of release, and relief.

Thus, the biblical neighbours 666 and 1260 are related in more ways than one implying that they have been carefully selected for use by the Lord.
In conclusion, one further point may be made: symbolically, the six-around-one principle of the hexagon speaks of the creation week, and the twelve-around-one of the star or hexagram, of Jahweh and the twelve tribes or the Lord Jesus and his disciples. [In this latter connection it is significant that the disciples needed to restore their number to 12 following the demise of Judas Iscariot (Acts 1:15-26)]

### 2.9 The Golden Section - 666's Crowning Glory

The so-called Golden Section refers to the division of a line such that the whole is to the greater part as that part is to the smaller part - a proportion which is considered to be particularly pleasing to the eye. Here is a depiction of the principle:


## Figure 26

whence we have the related Golden Ratio, $(a+b) / a=a / b$, usually represented by the lower case Greek letter 'phi' ( $\phi$ ).

This equation has as its unique positive solution the irrational number

$$
(1+\sqrt{ } 5) / 2=1.6180339 \ldots=\phi
$$

We read in the Wikipedia entry under this heading, "At least since the Renaissance, many artists and architects have proportioned their works to approximate the golden ratio - especially in the form of the Golden Rectangle (Figure 27), in which the ratio of the longer side to the shorter is the golden ratio...Mathematicians have studied the golden ratio because of its interesting properties."
$\phi$ is related to the Fibonacci Series: $0,1,1,2,3,5 \ldots$ which is formed by adding the latest two numbers to get the next one, starting from 0 and 1 . The ratio of consecutive terms in this series approximates $\phi$.


Figure 27
Observe that the rectangle generated by removing a square from the original figure is similar to it, i.e. its sides too are in the ratio $1: \phi$, and we may therefore write $\phi / 1=1 /(\phi-1)$. This leads to the two interesting outcomes:

$$
\begin{align*}
& \phi^{2}=\phi+1 \text {-------------------- }  \tag{i}\\
& \text { and } \\
& 1 / \phi=\phi-1 \text {---- } \tag{ii}
\end{align*}
$$

Now consider the following, which involve the reading of 1260, 666, 6.6.6 (=216), $6.6(=36)$ and $6+6+6(=18)$ as angles in degree measure:

$$
\begin{aligned}
\phi=-2 \sin (666) & =-2 \cos (216)=2 \cos (36)=\operatorname{cosec}(18) / 2 \\
& =-[\sin (666)+\cos (216)] \\
& =4 \sin (666) \cdot \cos (216)-1 \\
& =4 \sin ^{2}(666)+\cos (1260)
\end{aligned}
$$

etc........
These relationships may be readily confirmed using a scientific calculator.

## PART 3 - Here is Wisdom

Prompted by the words of Revelation 13:18, here is what the foregoing analysis has established:

1. In respect of 'counting 666': the representation of this number in absolute terms as a triangle clearly facilitates the process - involving either individual counters or row totals, i.e. the sequence $1,2,3, \ldots, 34,35,36$.
2. In respect of the fair and divinely approved reading of a name (or group of letters) as a number: the schemes of alphabetic numeration relating to the biblical languages Hebrew and Greek are historically attested.
3. In respect of 'understanding': as features of 666 per se, the following have here been revealed:
(1) 666 is a unique in its class - both in its appearance as a base-10 object and as epitome of triangularity [\#2.1]
(2) In combination with its scriptural companions 153 and 276, it leads to the Cryptogram that inhabits the Bible's first verse [\#2.2]
(3) As a 'magic square' - formed from the 36 row totals of its triangular representation - it is the delight of those involved with the recreational aspects of number, and - like the Cryptogram itself features multiples of the unique trifigurate prime 37 [\#2.3]
(4) It is accompanied and strongly supported by a second, smaller, square of prime numbers - the product of those occupying the central column being 2701 - an essential feature of the Cryptogram [\#2.4]
(5) Two solid figurate numbers 16206 and 8436 - 36th Pyramid and $36^{\text {th }}$ Tetrahedron, respectively, have faces of 666-as-triangle; both display features of the Cryptogram and appear in modified forms of the 666 magic square [\#2.5] [\#2.6]
(6) The Genesis 1:1 triangle incorporates 3 copies of 666-as-triangle and may be regarded as a face of the $73^{\text {rd }}$ tetrahedron; this implies a structure comprising 4 smaller tetrahedra of 8436 surmounting a core octahedron of 33781 - its factors 37 and 913; each of these is a significant component of the Cryptogram - the second being the number represented by the Bible's opening Hebrew word! [\#2.7]
(7) The near biblical neighbour of 666 is 1260; these numbers are shown to be related numerically in several ways - the most striking of these involving the metric dimensions of a $19^{\text {th }}$ century artefact! [\#2.8]
(8) A prime universal constant is found to be in an interesting trigonometrical relationship with 666 and its companions when these are expressed as angles in degrees [\#2.9]

Clearly, by any standard, this is a rare and impressive catalogue of attributes!
4. In respect of the promised Wisdom: simple logic and common sense lead us to the following conclusions -

- Since at the time of the writing of this Book, most (if not all) of the foregoing details would have been known only to our Creator, the choice of this number as a tag for the coming Antichrist is significant; indeed, this in itself constitutes proof of His Being and Sovereignty!
- Nevertheless, the primary purpose of this divinely-appointed riddle is surely to direct us to the Bible's opening verse, and to the Cryptogram!
- The Scriptures really are Inerrant; this means, of course, that the claims of science, as they contradict God's Word, are false.
- Clearly, such basic Truths need to be vigorously and widely proclaimed!

Vernon Jenkins MSc
08/09/17

Please note:

The author's book The Second Edge: a Role for Numerical Coincidence in the Pursuit of Truth may now be freely downloaded and read via the link www.whatabeginning.com/book.pdf, or purchased as a paperback from Amazon.

