The

SECOND EDGE

Monographs

ISSUE 4.

בראשית ברא אלהים את השמים ואת הארץ:

earth the.   and   heaven the   —   God   created   beginning the In

The Ultimate Assertion:

AN ABUNDANT ARTEFACT FORETOLD

Vernon Jenkins MSc

It is suggested that these booklets are read in the order of their publication beginning with the introductory Issue 1 – *'The Ultimate Assertion: evidence of supernatural design in the divine prologue.'*

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IN THE DIVINE PROLOGUE

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The
SECOND EDGE
Monographs

ISSUE 2.
בראשית ברא אלהים את השמים ואת הארץ
earth the   and   heaven the   —   God   created   beginning the In
The Ultimate Assertion:
STRUCTURAL HARMONY

Vernon Jenkins MSc

The
SECOND EDGE
Monographs

ISSUE 3.
בראשית ברא אלהים את השמים ואת הארץ
earth the   and   heaven the   —   God   created   beginning the In
The Ultimate Assertion:
EXTENDED VIEWS

Vernon Jenkins MSc

Hard-copies of these monographs may be obtained by first emailing their author at mentor37@virginmedia.com (with 'Second Edge' in the subject field) to receive the current catalogue, price list and order form.

Preamble

Our study begins with an examination of the astounding claim that the metric dimensions of an abundant 20th century artefact evoke aspects of [G+] – the numerical features of the Bible's first eight Hebrew words. The A4 sheet of paper is well-known to the greater part of the world's population (the principal exceptions being the USA and Canada) as the usual means by which people today communicate the written word, or generate computer hardcopy. This important artefact is found to be bound to the biblical data by a particular segment of a lattice structure of infinite extent. Herein lies the explanation for this *standing miracle*. Also uncovered in these associations are the 'surface features' 1260 and 666 which occur together in the Bible's final Book, Revelation.

There follows an instructive example from the pages of what may best be termed *recreational mathematics* (indulged in by some as an alternative to the crossword puzzle). This reveals significant connections between number *per se* – as represented in the familiar *denary* or base ten form – and the Genesis data. The focus is on an alternative expression of the biblically-given triangular number 666. This leads directly to the profitable application of 3-D figurate forms.

There are three appendices.

- Appendix 1 provides a background to the development of A4 as an international standard and outlines the stages of its historical development.
- Appendix 2 provides an introduction to the solid figurates, i.e. those numbers which may be represented as symmetrical stacks of unit spheres or cubes – the tetrahedron, cube and pyramid.
- Appendix 3 considers the intriguing presence of 1260 (expressed in a variety of ways) as a near neighbour of 666 in the Bible's last Book, and its features as an object of numerical geometry.

In keeping with earlier publication in this series, the discussion is led by AR – our Anonymous Reporter.


Vernon Jenkins

The Second Edge:

continuing the Bible's complementary message

You intend to begin, I understand, with news which will strongly encourage belief in the truth of the Christian Scriptures and provide valuable insights into God's sovereignty and the depth of His providence towards mankind.

Indeed. My topic here concerns the humble sheet of paper or card known as A4* – familiar to more than 90% of the world's population. Of particular interest are its nominal dimensions, viz. length = 297 mm; width = 210 mm. Observe that 297 = 3 x 99, and 210 = 2 x 105. It follows that the sheet may be precisely divided into 6 panels of size 99 mm x 105 mm. The following diagram captures these details.

A dimensioned A4 sheet and its natural subdivision
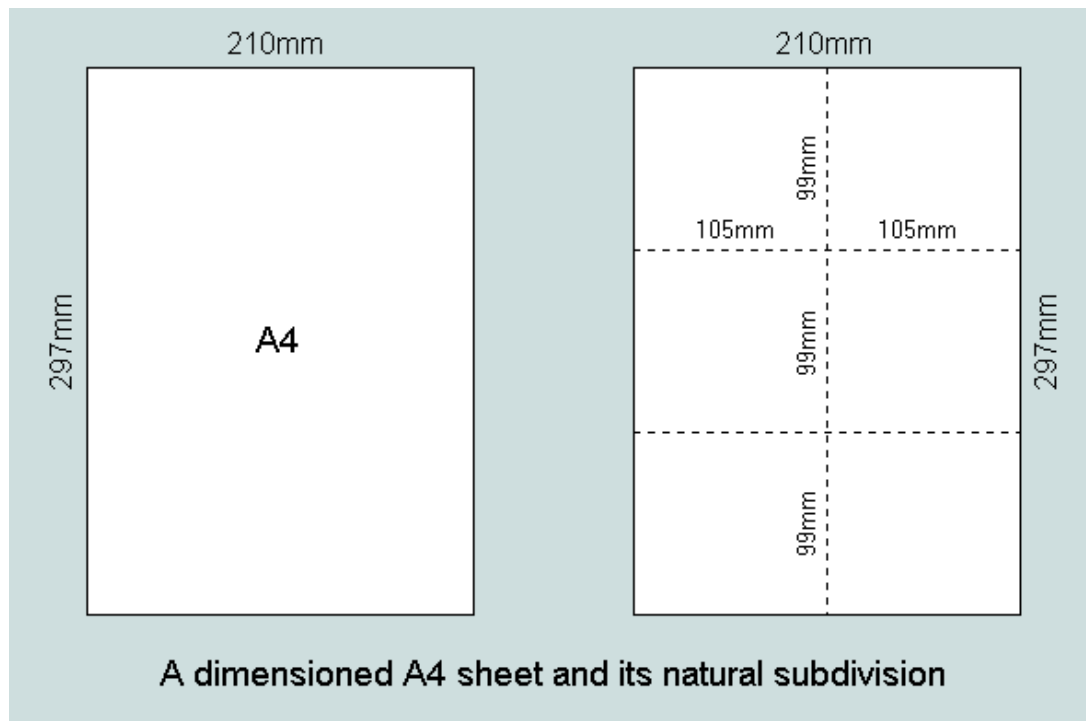
*Those unacquainted with the ISO-216 A-series of cut paper sizes are directed to Appendix 1 where a concise but adequate background is provided.

These dimensions invite two significant observations:

(1) 210 is a triangular number (the 20th) and the double of another, i.e. 105 (the 14th) – an extremely rare occurrence in the triangle series; as we have seen, the Ultimate Assertion is richly triangular.

(2) 297 is <u>1 more than</u> 296 which features as the CV of the Bible's 7th word and factor of the Lord's Name and Title (SE-1, pp.3,18). But further relationships of the same kind are present which involve the segmented sheet. These are depicted overleaf and lead to the following conclusions:

- ⅓ length + ½ width = 204, i.e. <u>1 more than</u> 203 (CV of word 2)
- length – width = 87, i.e. <u>1 more than</u> 86 (CV of word 3)
- length + ½ width = 402, i.e. <u>1 more than</u> 401 (CV of word 4)
- length + ⅓ length = 396, i.e. <u>1 more than</u> 395 (CV of word 5)
- ⅔ length + width = 408, i.e. <u>1 more than</u> 407 (CV of word 6)
- ⅔ length + ½ width = 303, i.e. <u>1 more than</u> 302 (CV of word8)
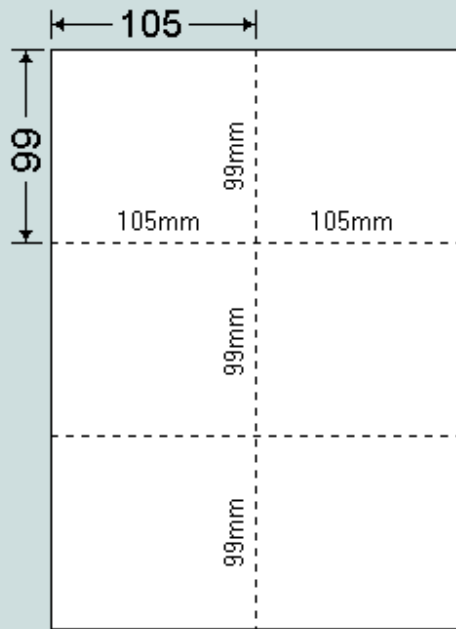
CLEARLY, THERE IS AN INTRIGUING PATTERN HERE WHICH, AMAZINGLY, STRONGLY SUGGESTS THE EXISTENCE OF A LINK BETWEEN THE METRIC DIMENSIONS OF THIS ABUNDANT MODERN ARTEFACT AND THE OPENING HEBREW WORDS OF THE JUDEO-CHRISTIAN SCRIPTURES! BUT IT'S A PITY IT ISN'T PRECISE.

Before passing judgement there's more to be said. For example, the factor 111 (= 3 x 37) may be exactly derived in similar fashion. This is significant because both Creator and Creation (represented by Genesis 1:1) involve multiples of this number (SE-1,pp.12,18).

THE PLOT THICKENS! BUT GENERAL PRECISION IS STILL LACKING AND, BESIDES, WORD 1 HAS YET TO BE ACCOMMODATED.
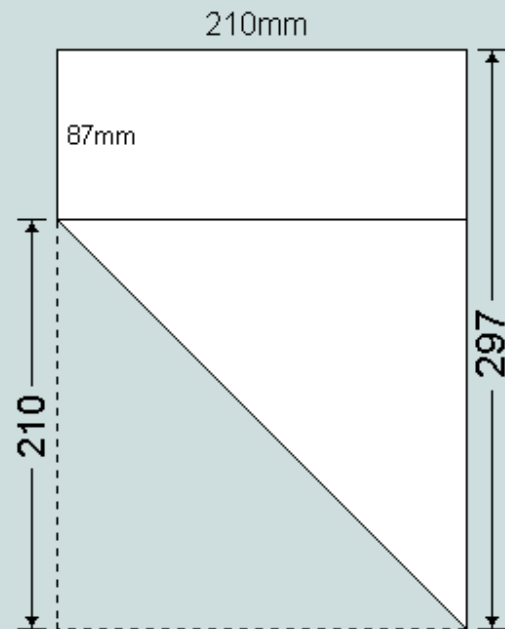
The solution to both problems is provided when we bring a metre ruler graduated in millimetres alongside the diagram depicting an

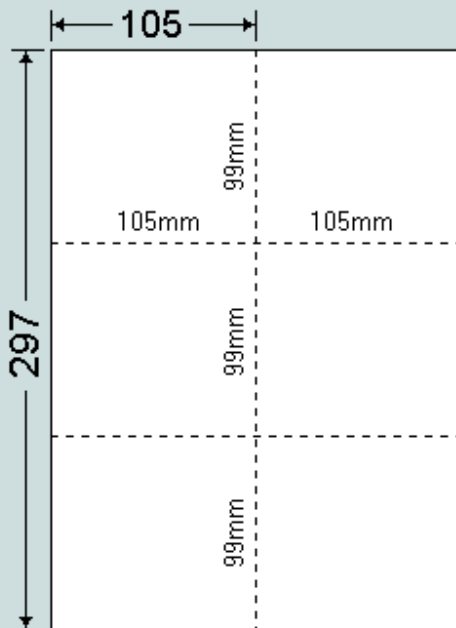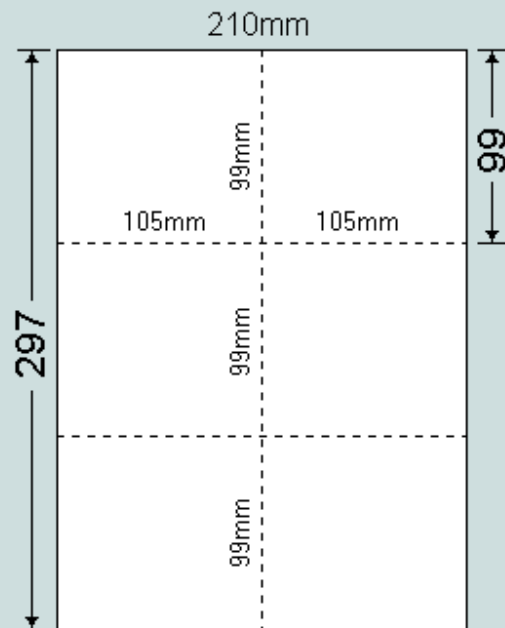[G$^+$] = [913 `203` `86` `401` `395` 407 296 302]

105

99

99mm

105mm   105mm

99mm

99mm

99 + 105 = 204

WORD 2 + 1

210mm

87mm

210

297

297 - 210 = 87

WORD 3 + 1

105

99mm

105mm   105mm

297

99mm

99mm

297 + 105 = 402

WORD 4 + 1

210mm

99mm

105mm   105mm

99

297

99mm

99mm

297 + 99 = 396

WORD 5 + 1

$$[G^+] = [913 \ 203 \ 86 \ 401 \ 395 \ \text{407} \ \text{296} \ \text{302}]$$

210

198

99mm

105mm   105mm

99mm

99mm

198 + 210 = 408

WORD 6 + 1

210mm

297

99mm

105mm   105mm

99mm

99mm

297

WORD 7 + 1

105

198

99mm

105mm   105mm

99mm

99mm

198 + 105 = 303

WORD 8 + 1

210

99

99mm

105mm   105mm
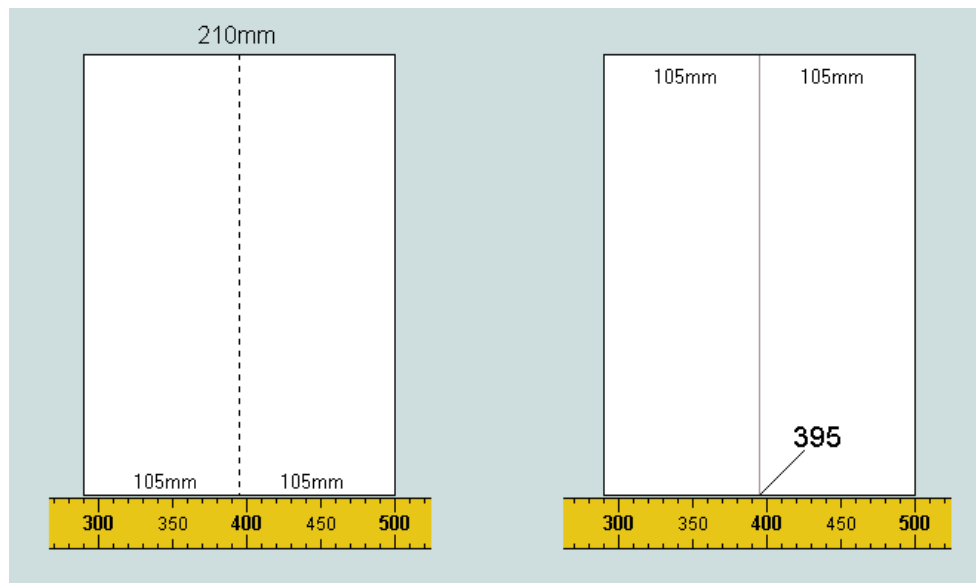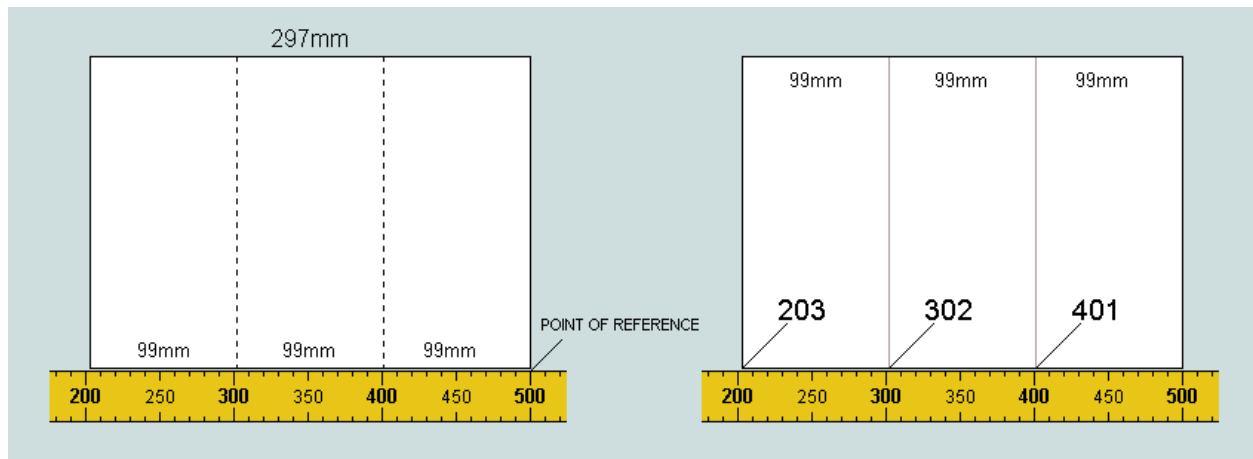
99mm

99mm
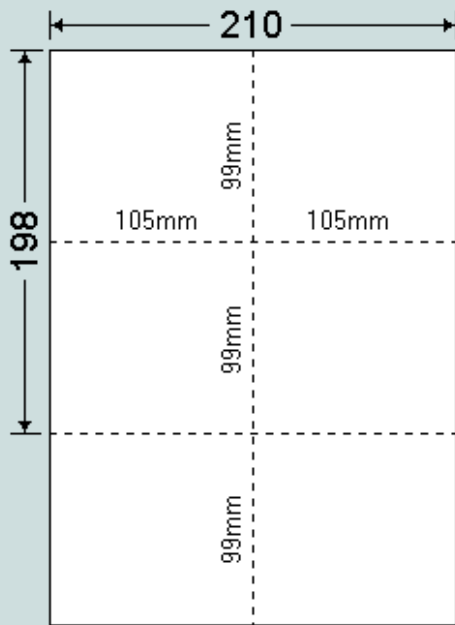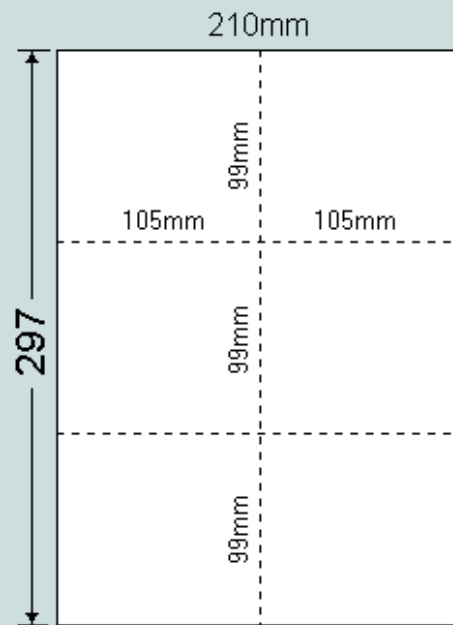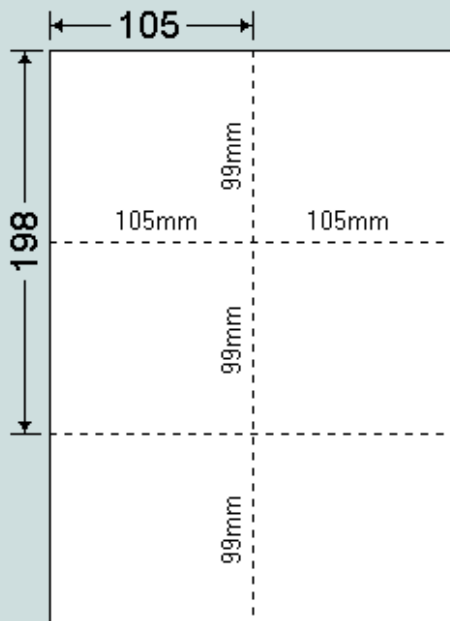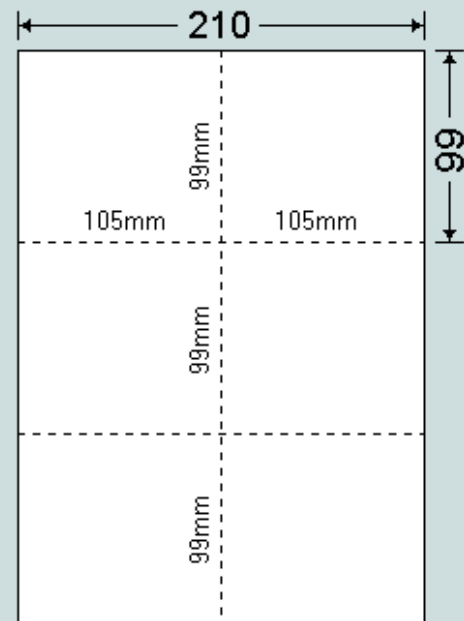
210 - 99 = 111 = 3 x 37

Factor of 666 and 888

A4 sheet folded crosswise. This arrangement is shown below. As may be seen, with the top of the sheet aligned with the 1000 mm mark point C registers 913 (the actual CV of word 1) and point B registers 703 (the actual sum of the CVs of words 6 and 7, and of words 4 and 8, i.e. 407 + 296 = 401 + 302 = 703) – value of the inner triangle of the Ultimate Assertion (see SE-1, pp.3,12).
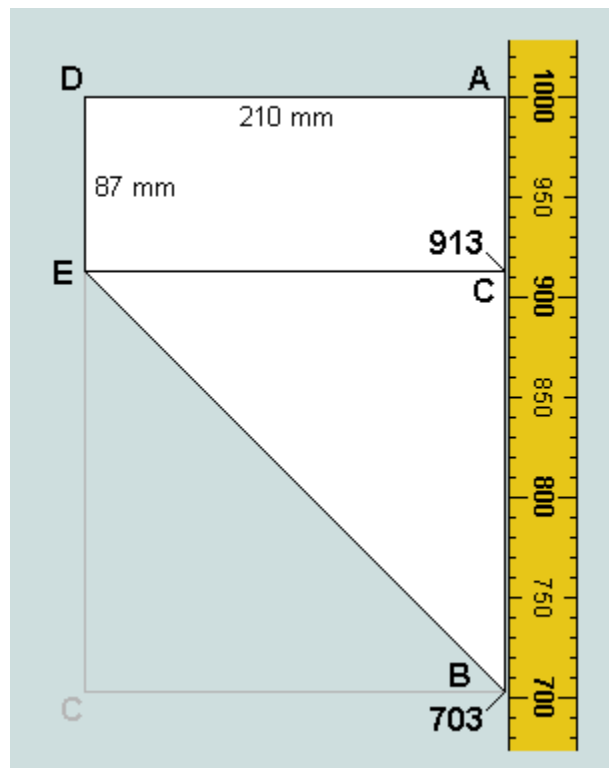
WELL, SO FAR, WE APPEAR TO HAVE THE FIRST CV ONLY AS A PRECISE VALUE, 2 PRECISE DOUBLES AND 7 NEAR MISSES! HOW DO YOU PROPOSE TO CONSOLIDATE THE SITUATION AND SO UPHOLD YOUR BOLD CLAIM THAT THE FIRST EIGHT HEBREW WORDS ANTICIPATE (EVEN 'DEFINE'!) THE A4 STANDARD?

Your question is simply answered by bringing a series of oriented sheets into contact with the ruler, thus:

here, a segmented sheet is shown - its right-hand edge aligned with the mid-point of the ruler. As may be seen, the CVs of words 4 (= 401), 8 (= 302) and 2 (= 203) are generated at the points of division of the sheet. A further CV – that of word 5 (= 395) occurs precisely when the shorter edge of the segmented sheet is brought into contact with the ruler at the 500 mm mark, thus:

Amazing! But how do you explain the change of reference point from ruler end to middle?

The CV of the first word is larger than any other – indeed, more than double the next smaller, 407. Also, (but what is not so apparent) it is different *in kind* from the rest: whereas 913 is *1 more than* a multiple of 3,

the remaining 7 are all *1 less than* a multiple of 3. In short, they are derived differently because of this distinction – but further explanation is provided later.

Here then is where we currently stand:

[G⁺] = [913, 203, 86, 401, 395, 407, 296, 302] - the precise values, as found above, highlighted.

Our first objective, 407 (CV of word 6) may be expressed as 302 + 105 and determined as a ruler measurement using the already established 302, thus:

105mm   105mm

POINT OF
REFERENCE
302   407

300   350   400   450   500
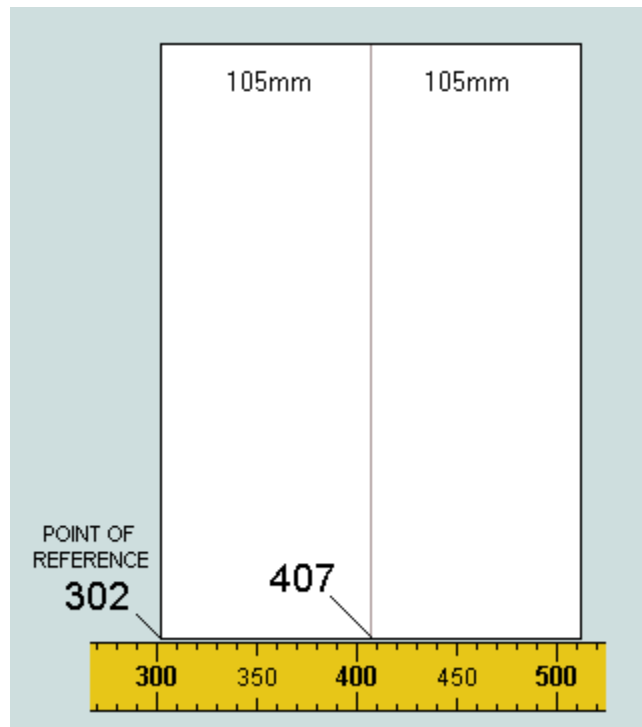
To determine the 2 remaining values 86 and 296 precisely requires the application of a different principle – one that derives from the fact that A5 (i.e. the paper size representing a half of A4 – and the pages of this booklet!) has the nominal dimensions 210 mm (the width of A4) x 148 mm (because halving 297 – the length of A4 – yields 148.5 and, since the standard does not allow fractions of a millimetre, the '.5' is ignored). It follows that an attempt to reconstitute A4 from 2 x A5 sheets placed side

by side must fail for the dimensions of the resulting rectangle are now 296 mm x 210 mm. Observe that this result is not contrived, but rather dictated by the rules of ISO 216. We shall use the term A4' (A-four-dash) to refer to this result as it is used in further constructions.

TO CLARIFY THIS IMPORTANT MATTER, I OBSERVE THAT YOU JUSTIFY YOUR PROPOSAL TO USE A4' INSTEAD OF A4 BECAUSE IT IS A LOGICAL OUTCOME OF THE APPLICATION OF THE STANDARD.

Correct. Such things do not happen by chance. With this development we now have the ability to obtain 86 and 296 precisely, thus:
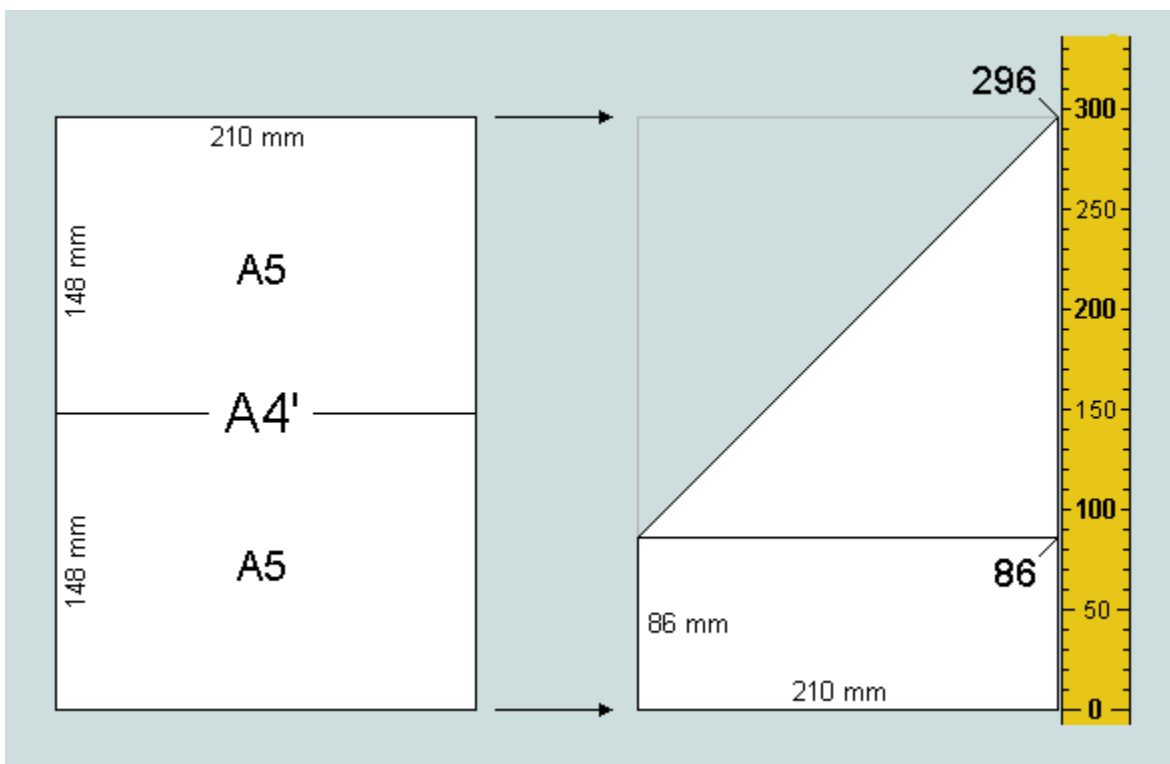
Observe that we are again using a cross-folded sheet but now aligned with the zero mark of the ruler.

BRILLIANT! SO NOW WE HAVE THE COMPLETE SET OF WORD CVS WHICH DEFINE THE ULTIMATE ASSERTION — OR RATHER, VICE VERSA, FOR THESE HEBREW WORDS PRECEDED THE INVENTION OF THE A-SERIES BY SOME 6000 YEARS.

Correct. Here, in diagrammatic form, is a summary of our findings.
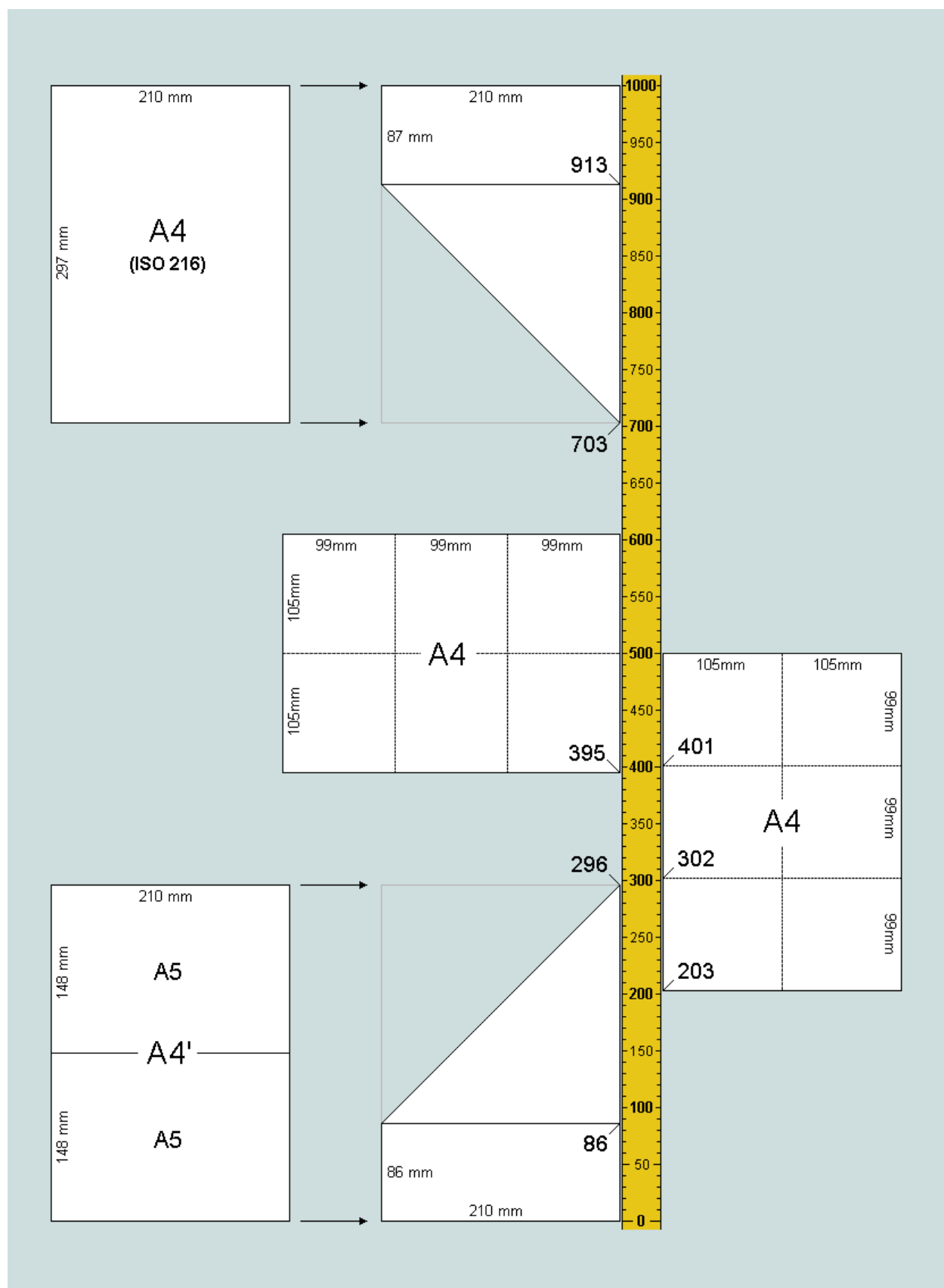
The particular features of the Genesis data that determine these wonders of A4 are the Characteristic Value (CV) *differences*.

I SEE. YOUR EARLIER MONOGRAPHS IN THIS SERIES HAVE, OF COURSE, BEEN CONCERNED WITH SUMS OR PRODUCTS OF SEQUENCES DRAWN FROM ONE OR OTHER OF THE NUMBER SETS,

[G] = [913, 203, 086, 401, 395, 407, 296]
(THIS, A FAIR ALTERNATIVE READING OF THE HEBREW BIBLE'S FIRST VERSE OF 7 WORDS)

AND [G⁺] = [913, 203, 086, 401, 395, 407, 296, 302]
(I.E. [G] AUGMENTED BY THE FIRST WORD OF THE SECOND VERSE)

Correct. Now, given a set of tabular values for which some pattern is being sought, it is commonly found that the derivation of a *table of differences* provides a way forward. Such is the table given below.

	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8
	913	203	86	401	395	407	296	302
Row 1	913	710	827	512	518	506	617	611
Row 2		203	117	198	192	204	93	99
Row 3			86	315	309	321	210	216
Row 4				401	6	6	105	99
Row 5					395	12	99	93
Row 6						407	111	105
Row 7							296	6

Observe that **[G⁺]** heads the columns of this table and **[G]**, the rows. All the tabular values are expressed as positive numbers (achieved by subtracting smaller from larger in each case). Each cell of the table lies at the point of intersection of a row and a column and may thus be uniquely identified by a pair of numbers. For example, cell (2, 5) lies at the intersection of row 2 with column 5; its contents, 192 – the difference between CVs 2 and 5. The remaining cells are filled accordingly.

99 and **105** (the dimensions of each of the 6 panels of an A4 sheet) are observed to figure prominently in this table, thus:

$$401 - 302 = 302 - 203 = 395 - 296 = \textbf{99}$$

$$407 - 302 = 401 - 296 = (296 - 86)/2 = \textbf{105}$$

The remaining differences – **except those involving 913** – may each be simply expressed in terms of these parameters, thus:

6 = 105 – 99; **12** = 2.(105 – 99); **93** = 2.99 – 105; **111** = 2.105 – 99; **117** = 3.105 – 2.99; **192** = 3.99 – 105; **198** = 2.99; **204** = 99 + 105; **210** = 2.105; **216** = 3.105 – 99; **309** = 2.105 + 99; **315** = 3.105; **321** = 4.105 – 99.

[Note the use of the period (.) here to signify 'multiplied by']

But we also observe that if **296 (factor of the Lord's Name and Title, and CV of the Bible's 7ᵗʰ word)** be subtracted from each of the differences involving **913** the residues fall in with the same scheme! Thus,

710 – 296 = 414 = 3.105 + 99; **827** – 296 = 531 = 6.105 – 99; **512** – 296 = 216 = 3.105 – 99; **518** – 296 = 222 = 4.105 – 2.99; **506** – 296 = 210 = 2.105; **617** – 296 = 321 = 4.105 – 99; **611** – 296 = 315 = 3.105.

[Of passing interest, **216** and **512** (the cubes of 6 and 8, respectively) are seen to be included in the table of differences.]

Clearly, these eight values – representing a natural alternative reading of the first eight Hebrew words of Genesis – which we might have expected to

be numerically independent, are here shown to belong together! These observations lead to a formal description of the opening words, thus:

If G_i be taken to represent the ith word of the Bible, then each CV of words 1 to 8 is found to be of the form:

$$G^+_i = 296.a_i + 105.b_i + 99.c_i \quad (1 \leq i \leq 8)*$$

the parameters, 296, 105 and 99 matching the differences established above, and the variables all small integers, thus:

i	G^+_i	a_i	b_i	c_i
1	913	2	4	-1
2	203	1	1	-2
3	86	1	-2	0
4	401	1	1	0
5	395	1	0	1
6	407	1	2	-1
7	296	1	0	0
8	302	1	1	-1

As already observed, all the CVs represented in **[G⁺]** except the first are each 1 less than a multiple of 3; the first, 1 more, and therefore different in kind from the rest. Following standard conventions the following diagram depicts a spatial arrangements of these values and, in a separate relationship, reveals that 703 (the sum of CVs 6 and 7) features with 913, the first.

At (a), we find CVs 2 through 8 involved horizontally with 210 and 105 (20th and 14th triangles, respectively) and, vertically, with 99 – the difference between 105 and 6 (which marks a second double triangle since 3 is also triangular).

*Observe that this expression of the range of i involves use of the symbol '≤' meaning 'less than or equal to'.

At (b), 703 (triangular sum of CVs 6 and 7, and also of CVs 4 and 8) is shown to be related to 913 by the triangular difference, 210.
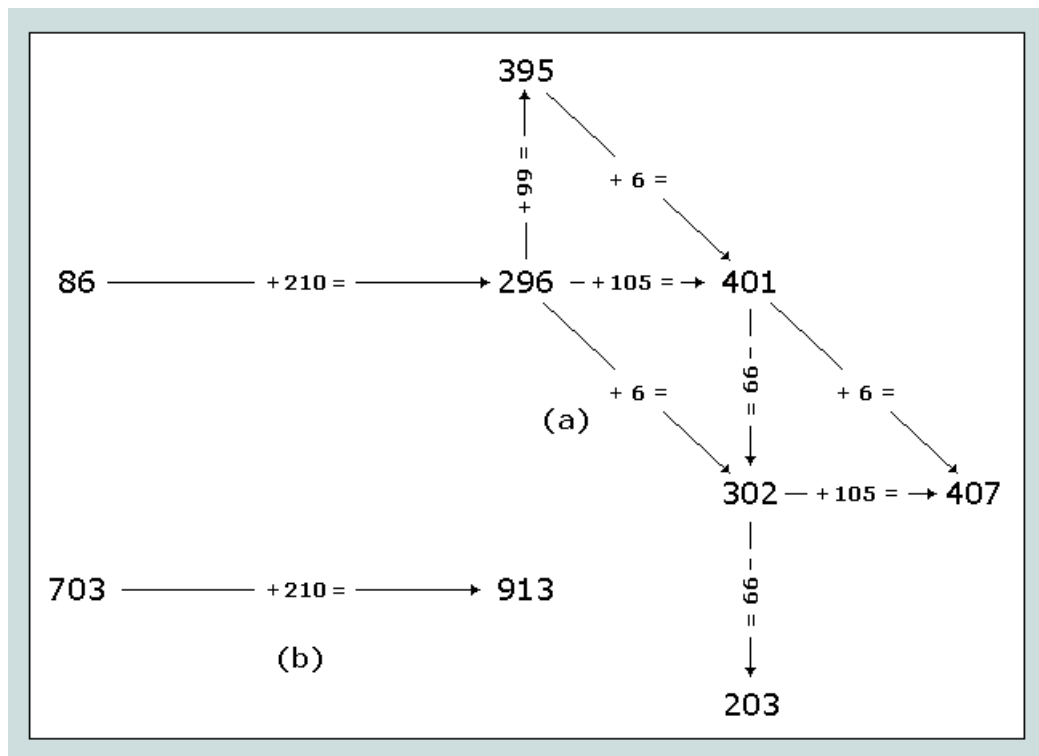
Remarkably, these related differences, 210, 105, 99 and 6, may be summarized geometrically – as in the following diagram:
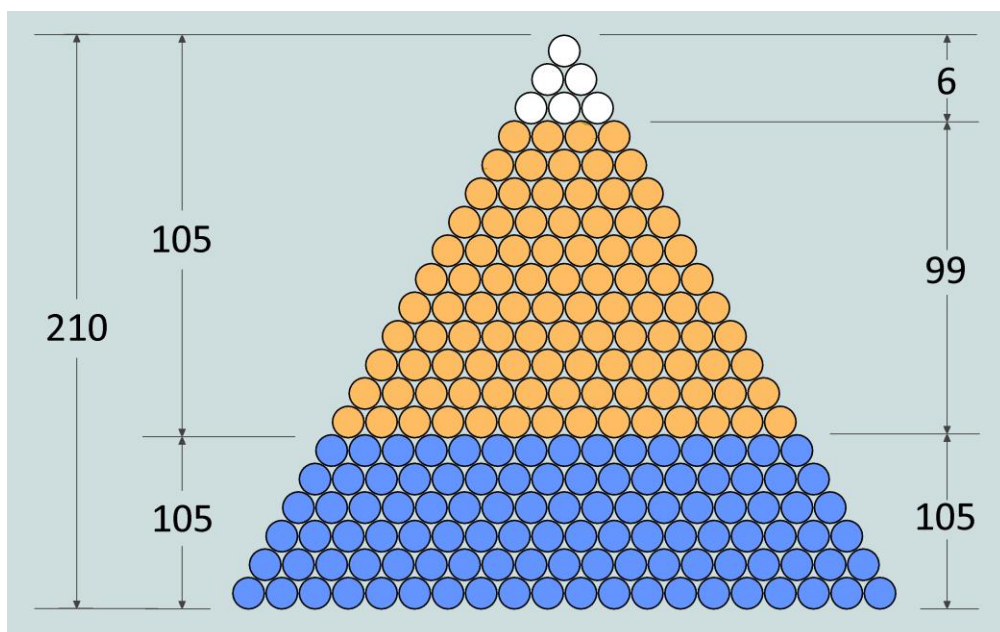
The earlier figure suggests that the Author of these wonders had in mind a *lattice* structure of unlimited extent comprising two sets of lines – spaced 105 units horizontally and 99 units vertically - within which numbers could be logically allocated at each point of intersection – the condition being that each number would be 105 more than its leftward neighbour and 99 more than that immediately below. On this basis, the placing of a single number (the 'seed') at any given position would immediately populate the lattice. The next figure depicts a limited region of this lattice – the appropriately chosen seed being 296, or 8.37 (marked in red) – factor of both Name and Title of Jesus Christ, and 7th CV of [G$^+$]. Observe that all but the first CV, 913, are accommodated.
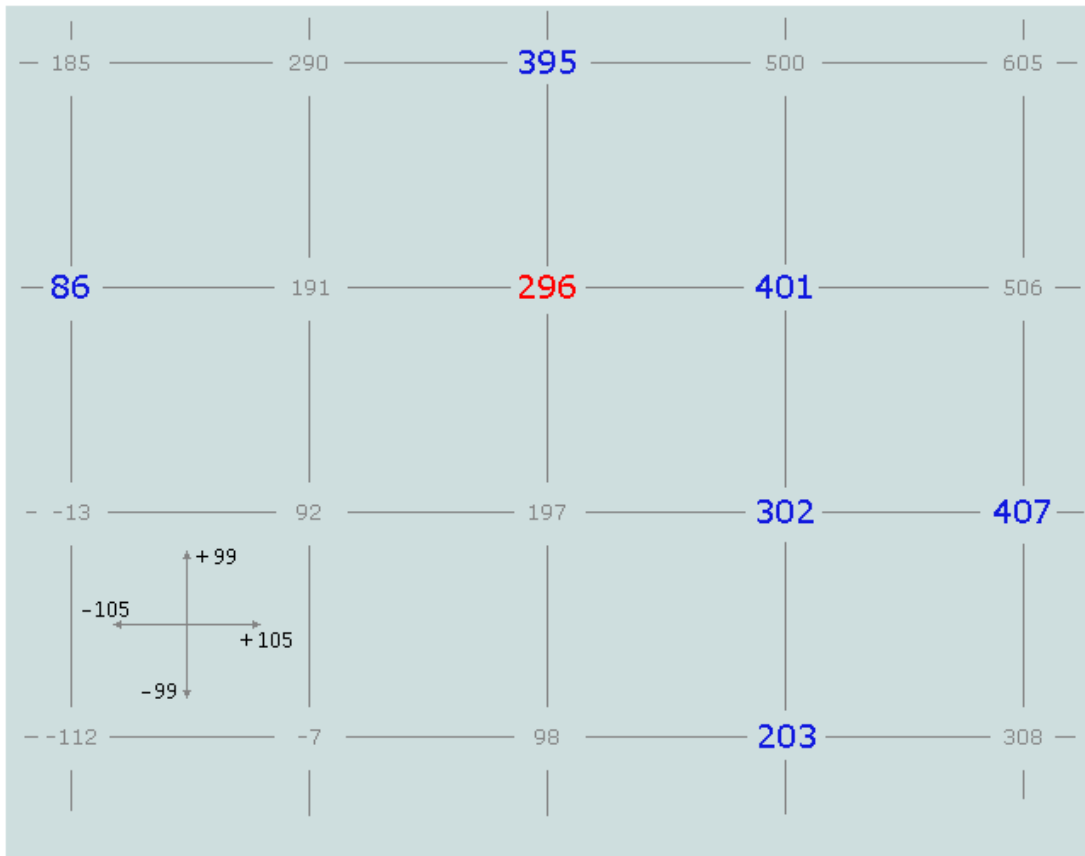
But this is quite remarkable! It is as though I am looking at a pair of segmented A4 sheets laid side by side. Clearly, this lattice structure derives from a consideration of [G$^+$]

While 913 may be seen as the sum of the adjacent values 506 and 407, and 703, likewise, as the sum of 401 and 302, both are better revealed as companions of the <u>doubles</u> of the foregoing CVs represented in the diagram following (which depicts a segment of a lattice parallel to the original).
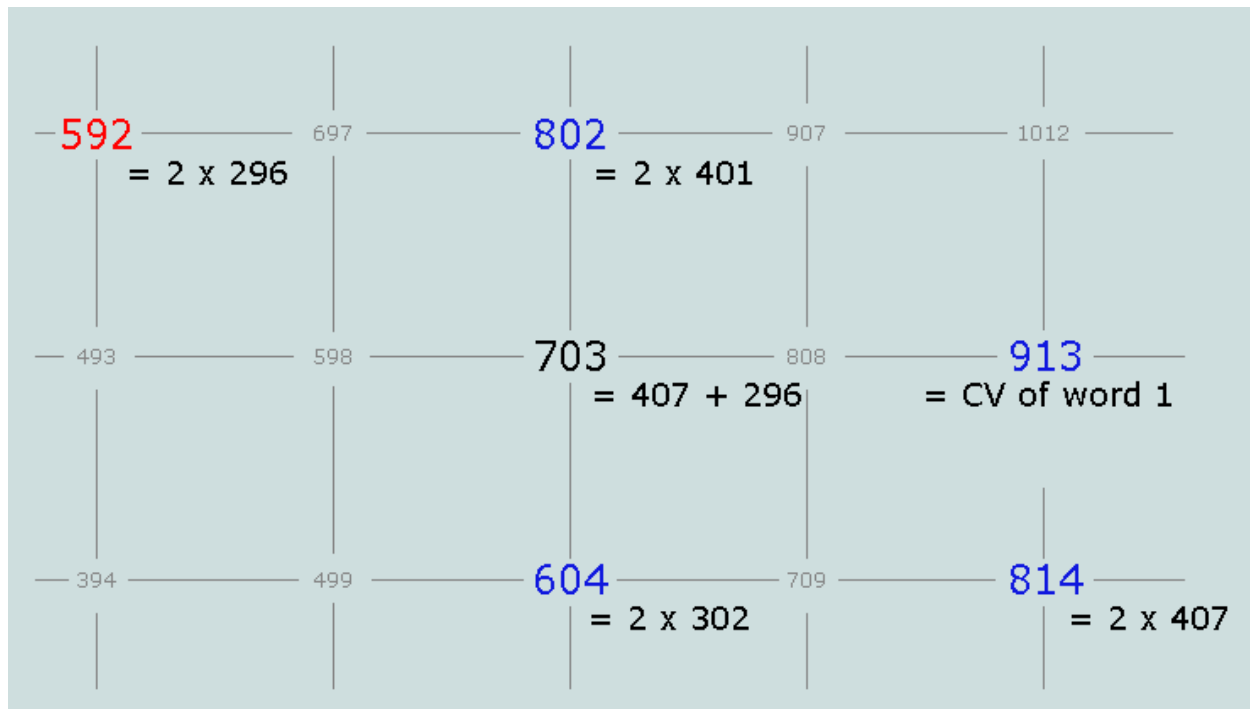
Observe that the line spacings are as before, viz. 105 horizontally, and 99 vertically – so that this picture also may be modelled using segmented sheets of A4.

These details speak for themselves. But the further conjunctions are worth repeating:

- A feature of the triangular number series is the rarity of those related pairs one of which is the double of the other; such is the pair 210/105

- A feature of the A-series of cut paper sizes is that its principal representative A4 has the nominal dimensions 297mm x 210mm which may be precisely divided into six rectangles of size 99mm x 105mm
- A feature of the opening Hebrew words of the Judeo-Christian Scriptures is that their CVs lie on the nodes of a lattice structure (the Genesis Lattice) whose horizontals and verticals are spaced at intervals of 99 and 105 units, respectively
- A feature of the Book of Revelation is the adjacent pair of numbers 666/1260; as the diagram on page 27 reveals, these are directly related to the metric dimensions of A4

The story of A4 stretches back into the distant past. We have to begin with the Creator's decisions *vis-à-vis* the diameter of the Earth (for this is the ultimate basis for all metric measurement) and the relevant characteristics of man. [But see also 'The Genesis of a Standard', p.22]

I THINK YOU'VE MADE YOUR POINT. HERE, INDEED IS A STANDING MIRACLE WORTHY OF THE NAME! YOU INTEND TO CONTINUE, I BELIEVE, WITH SOME FURTHER PROPERTIES OF 666 *PER SE* WHICH LINK IT FURTHER WITH THE ULTIMATE ASSERTION.

Yes, as an example of recreational mathematics we have the following array in which the first 36 whole numbers appear, their sum, the 36th triangular number 666.

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

Remarkably, the numbers in each row, column and long diagonal total 111 (=3x37), thus:

The core elements total 296 (=8x37) and the outline, 370 (= 10x37), thus:

Observe that 37 is the abundant factor of Genesis 1:1 (SE-2, pp.5-7) and 296 is the CV of word 7 of this verse and factor of the Creators Name and Title.

The sum of the squares of the array numbers in each row = 2701 = 37.73 = 73rd triangular number = Genesis 1:1 - the Ultimate Assertion.

64	900	676	484	576	1	→	2701
4	1156	324	784	144	289	→	2701
49	400	9	841	961	441	→	2701
625	16	529	225	81	1225	→	2701
1296	169	729	121	361	25	→	2701
1089	100	196	36	256	1024	→	2701

→ 16206 = 6 x 2701

The data given above may be interpreted as the numbers of spherical counters in successive square layers of the 36th numerical pyramid (a figure resting on a base of 1296 and displaying 4 faces of 666-as-triangle) – their total being 16206, 6 times the 3rd triangular multiple of 37, viz. 2701. See Appendix 2 for further details.

The sum of the triangles of orders represented by the array numbers in each row = 2.703 = 2.19.37 = twice the 37th triangular number

36	465	351	253	300	1	→	1406
3	595	171	406	78	153	→	1406
28	210	6	435	496	231	→	1406
325	10	276	120	45	630	→	1406
666	91	378	66	190	15	→	1406
561	55	105	21	136	528	→	1406

→ 8436 = 12 x 703

Figure 13

The data given above may be interpreted as the numbers of spherical counters in successive triangular layers of the 36th numerical tetrahedron (a figure resting on a base of 666 and having 3 equal faces of 666-as-triangle) – their total being 8436, 12 times the 2rd triangular multiple of 37, viz.703. A particularly interesting outcome of these expressions of 666 is the emergence of its two Genesis companion triangular multiples of 37, viz. 703 and 2701.

These features combine to further establish the fact that 666 *per se* is unique among the numbers - a revelation that becomes an essential component of the *understanding* we seek and suggests that this understanding, together with all that follows, is tantamount to overcoming 666 (thus fulfilling the prophecy of Rev.15:2).

All extremely thought-provoking! Thank you.

AR

The features catalogued here, taken together with those recorded in earlier Issues of these monographs, provide incontrovertible evidence that the Bible is a text that has been divinely underwritten - an ability to count being all that is required to appreciate what God has provided to correct the beliefs of our 'enlightened' hi-tech generation.
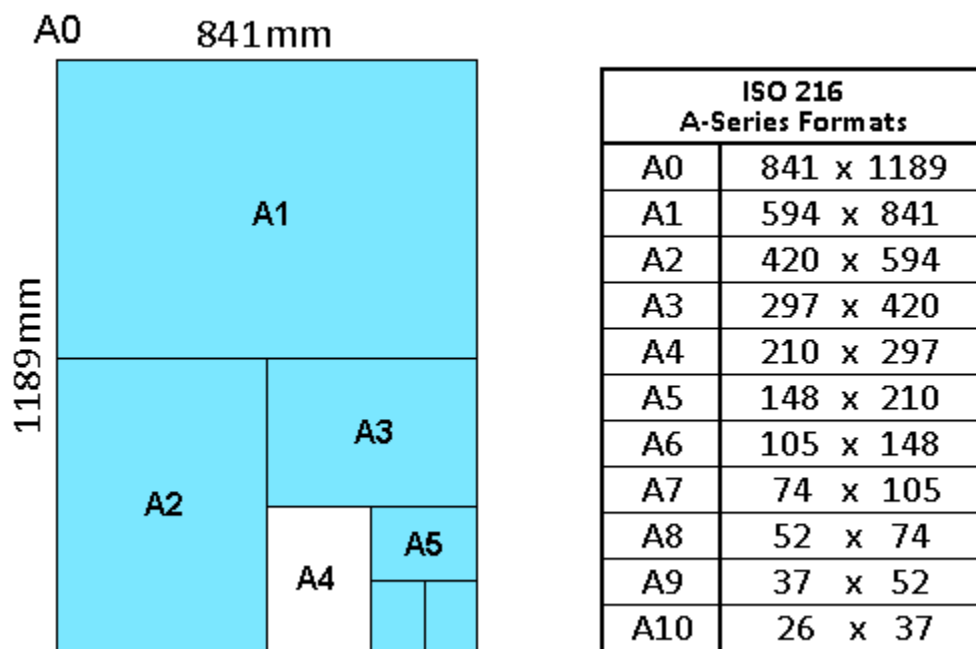
To Him alone be the glory!

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June, 2014

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www.otherbiblecode.com

Appendix 1 - The ISO 216 A-Series of cut paper sizes

Recommended as an international standard by ISO* in 1961, the **A-series** of cut paper sizes is now widely established. It is based upon a rectangle (A0) having an area of one square metre and sides in the ratio √2:1. These proportions are automatically conferred upon its progeny A1, A2, A3, and so on, by a modified process of halving. All dimensions are expressed to the nearest whole number of millimeters.

ISO 216 A-Series Formats	
A0	841 x 1189
A1	594 x 841
A2	420 x 594
A3	297 x 420
A4	210 x 297
A5	148 x 210
A6	105 x 148
A7	74 x 105
A8	52 x 74
A9	37 x 52
A10	26 x 37

Interestingly, 841 (the width of A0) = 29^2 and 1189 (its length) is the number of chapters in the Bible; further, the details concerning the A-series were published as ISO 216 – 216 being 6^3, or 6.6.6, the peripheral count of the G-triangle and sum of the attributes of 666-as-triangle.

* **International Organization for Standardization.** ISO is a non-governmental organization established in 1947 to promote the development of standardization and related activities in the world. It comprises a network of national standards institutes for 140 countries working in partnership with international organizations, governments, industry, business and consumer representatives.

In the present context , A4 - its best known representative and currently the most popular medium for recording and communicating the written word (accepted and used by more than 90% of the world's population) – occupies centre stage. Its dimensions are nominally 297 x 210 millimetres.

The 'root' format, A0 has an area which closely approximates to one square metre (= 1,000,000 square millimetres) and sides in the ratio $\sqrt{2}$:1. The precise dimensions of a rectangle with these targets in mind may be derived as follows:

Let the required width be **w** millimetres so that the corresponding length is $\sqrt{2}$**w** mm and the area, $\sqrt{2}$**w²** = 1,000,000 square mm. Solving this equation, we find

w (the width) = **840.8964...** and $\sqrt{2}$**w** (the length) = **1189.2071... mm**

Observe that these figures are rounded to 841mm and 1189mm because the standard does not allow fractions of a millimetre.

The development of the nominal dimensions of the remaining formats then proceeds by a process of **halving - in which fractions are ignored**. Thus, the length of A1 becomes the width of A0 (i.e. 841) and its width, half the length of A0 (actually 594.5), or 594. Similarly, A2 becomes a 420 x 594 rectangle, and so on. In this manner, the ratio of the sides is closely maintained to $\sqrt{2}$:1 throughout the series.

The metric dimensions of an A4 sheet are nominally 297 x 210 – and thus its length is one more than 296 – which, as we have seen, has important associations with Genesis 1:1 (being the CV of its 7ᵗʰ word and multiple of the uniquely symmetrical prime 37) and, in addition, factor of both Creator's Name and Title. Halving 297, to determine the width of A5 we obtain 148.5 mm > 148 mm (ignoring the fraction – as the standard requires). Thus, an attempt to reverse the operation by laying two A5 sheets side-by-side would yield a rectangle nominally of size 296 x 210 mm (here referred to as A4'). So, in this halving operation, observe that a millimetre has been *legitimately* lost to the length because of the requirements of the standard – and for no other reason.

The Metre. In 1793, during Napoleon's time, the French government adopted a new system of standards called the *metric system*, based on what they called the *metre*. Relying on the assumed constancy of the earth's size as a basis for the permanency of their standards, this unit was reckoned to be one ten-millionth part of the distance from North Pole to Equator measured on a straight line running along the surface of the earth through Paris. Other linear units of the system were then set up in decimal ratios with the metre. Of particular interest in the present context is the *millimetre* - one thousandth part of a metre. Today almost all countries use a modernized metric system called *SI*.
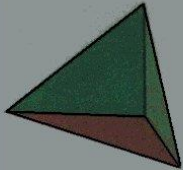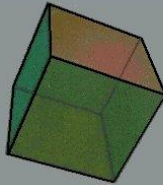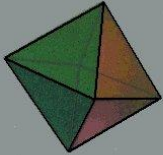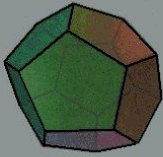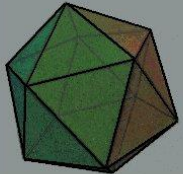
The Genesis of a Standard. It is profitable that we briefly review the sequence of events that has led inexorably to the appearance of A4 in our day:

- He who created the earth must already have decided what size it should be – a decision that would become a key factor in determining the absolute length of the metre in the 18th century;
- He who created the earth also created man – having already made decisions concerning his physical, mental, and other attributes which, ultimately, would determine a suitable and preferred document shape and size for general use;
- He who created had also made it clear that ten was a significant number – particularly suitable for use, (a) as radix for man's systems of number representation and, (b) as a multiplier and sub-multiplier to complement the metre in the establishing the *metric sytem's* dominance in 21st century metrology;
- man's decision to choose the square root of 2 ($\sqrt{2}$) as the ratio of the sides of his preferred shape, the rectangle, has arisen from considerations of utility, economy, and simple logic – as befitting those created in God's image.
- man's need to communicate and calculate led to the development of language and an evolving system of numeration

It is therefore exceedingly difficult to avoid the conclusion that all who, though unwittingly, had a hand in bringing about the *Ultimate Assertion / A4* phenomena were simply responding to the dictates of a Higher Authority! An adequate explanation thus demands the existence of an Omniscient, Omnipotent, Interested and Purposeful *Supervisor.* Surely, He can be none other than *Elohim*, the God of Creation – the Lord Jesus Christ!

Appendix 2 – The Figurate Solids

The ancient Greeks discovered that there are just 5 regular solid shapes capable of being fitted precisely within a sphere. Known as the *platonic solids,* they are tetrahedron, cube, octahedron, dodecahedron and icosahedron, as depicted below.

POLYHEDRON		VERTICES	EDGES	FACES
tetrahedron		4	6	4
hexahedron (cube)		8	12	6
octahedron		6	12	8
dodecahedron		20	30	12
icosahedron		12	30	20

Observe that each face is the same regular polygon and that the same number of polygons meet at each vertex.

The symmetry, structural integrity, and beauty of these solids have inspired architects, artists and artisans from the earliest times. The first three alone lend themselves to expression as figurate numbers and hence permit the construction of numerical geometries from unit spheres or cubes. While interest to this point has primarily focused on 2-D structures like triangle,

trapezium and square, simple 3-D forms like cube and solid gnomon (i.e. the difference between adjacent cubes) have also received attention (SE-1, pp.19, 20) and require no further comment. So, turning now to consider numerical tetrahedron and pyramid (here represented as a *semi-octahedron*) we observe the nature of these structures as figurate numbers in the following diagrams where exploded views and relevant alternative packing procedures are provided to assist the understanding:

TETRAHEDRON   PYRAMID

(a)   (b)

Packing arrangements
(as viewed from above)
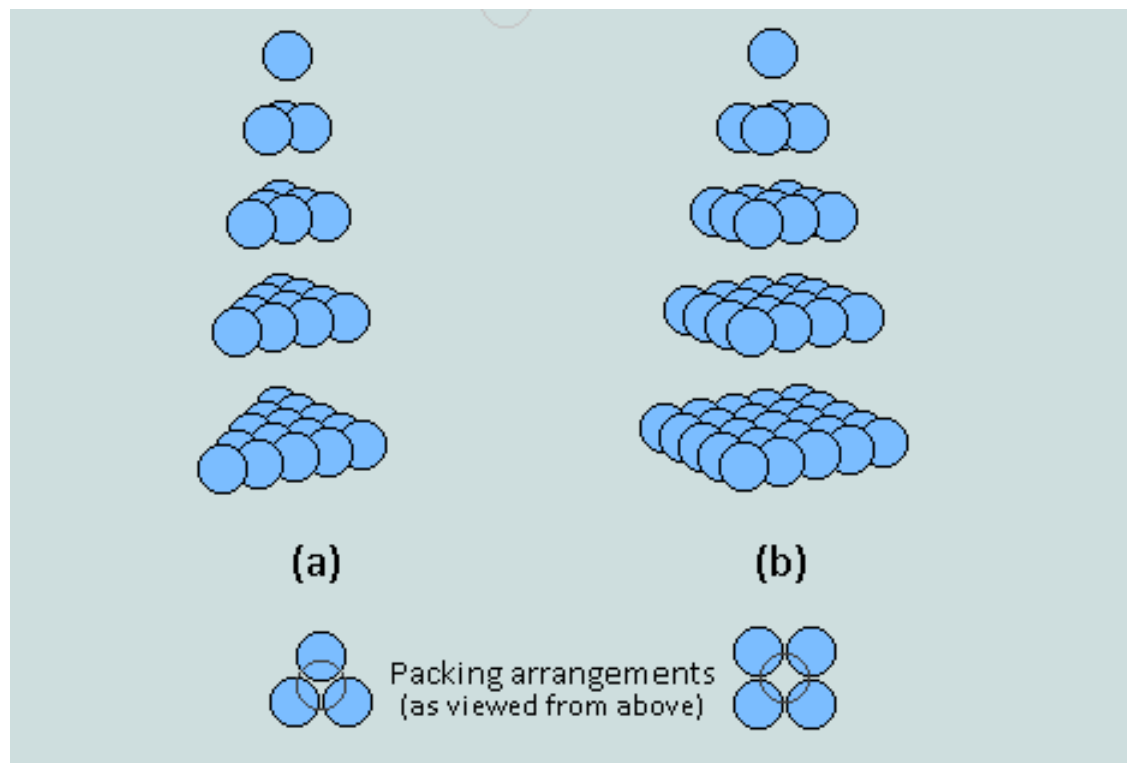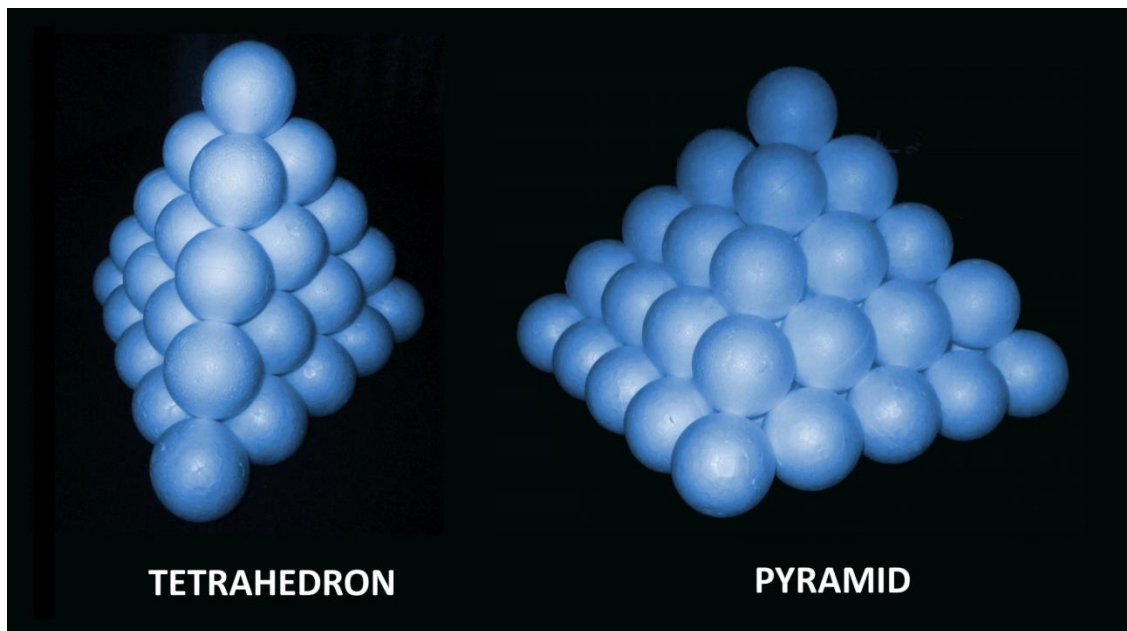
Here the 3-D figurate numbers are revealed as a sequence of triangular numbers (tetrahedron) or squares (pyramid) – each designated by the number of unit spheres (the *counters*) forming a side or edge. The faces are congruent triangles of the same order as the figure. So, here we see the 5th numerical tetrahedron (= 35) and 5th numerical pyramid (= 55) standing on bases of 5th triangle (= 15)and 5th square (= 25), respectively; all other faces, 5th triangle.

Two simple formulae enable us to determine the value represented by these solids. Thus, for tetrahedron,

$$n = d.(d + 1).(d + 2) / 6$$

> where d is the order number (or dimension) and n, the total number of counters represented.

> For example, the 36th tetrahedron may be constructed from 36.37.38 / 6 = 8436 spheres, and the number represented is therefore 8436.

For the pyramid, the relevant formula is,

$$n = d.(d + 1).(2d + 1) / 6$$

> For example, the 19th pyramid may be constructed from 19.20.39 / 6 = 2470 spheres.

The faces are, of course, triangles. To determine the number of visible counters the appropriate formula here is

$$n = i.(i + 1) / 2$$

> where i is the order number of the triangle and n the total of counters involved in its construction.

Thus, the faces of tetrahedron and pyramid in the above examples are 36.37 / 2 = 666 and 19.20 / 2 = 190, respectively.

In these formulae, observe the use of the stop '.' to mean 'multiplied by'.

Appendix 3 – An Exceptional Day

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.

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 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. 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 outer brown triangles of 630 that form a cradle for the 666-as-triangle.
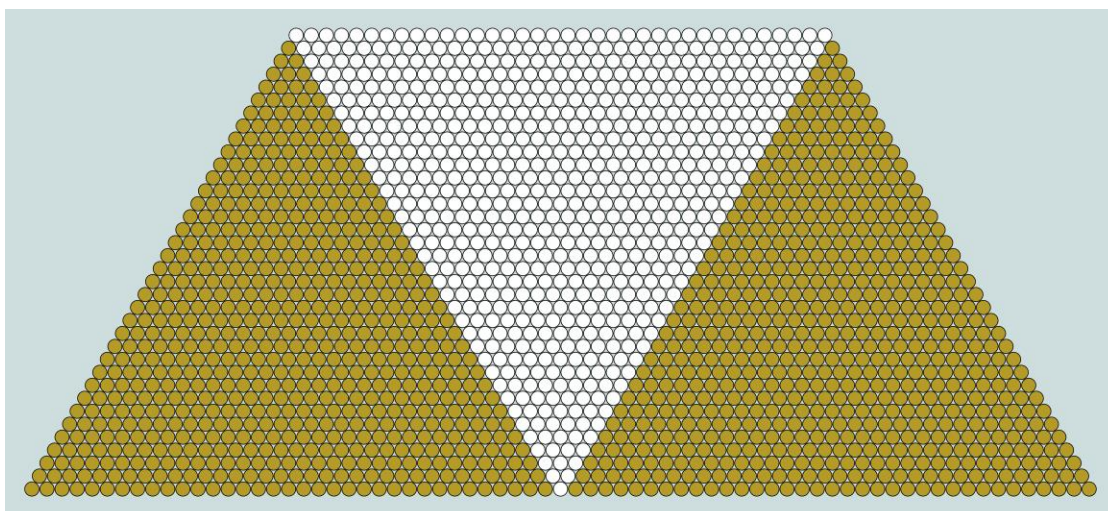
666-as-triangle cradled by 1260-as-triangular pair

They 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:
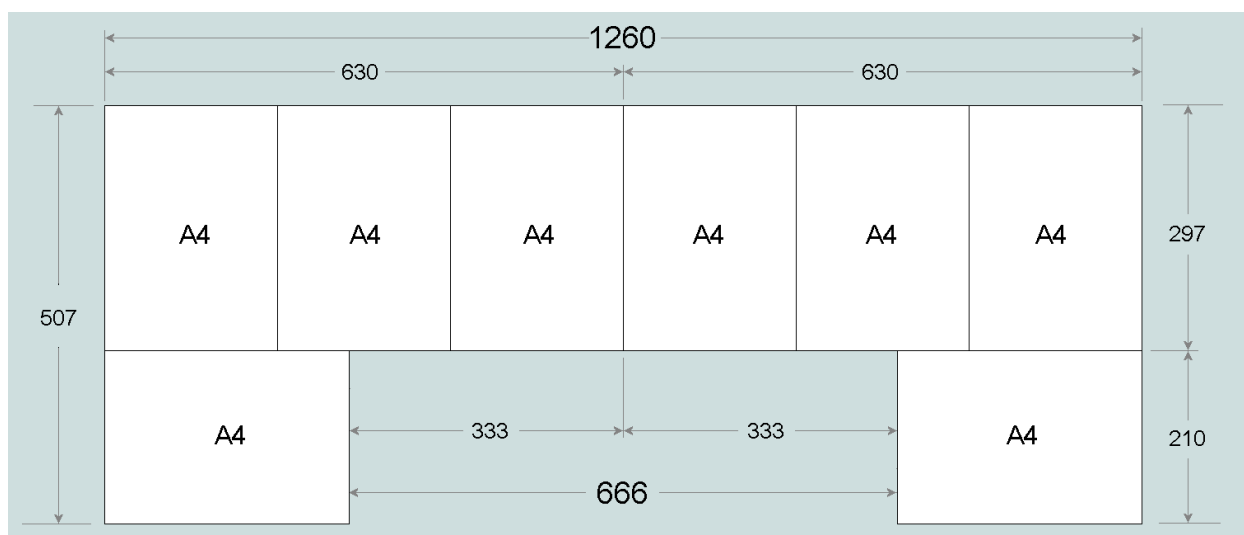
A relationship between 666 and 1260 established using 8 x A4 sheets

Here, 6 x 210 – 2 x 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 15th hexagram and 21st hexagon, thus:
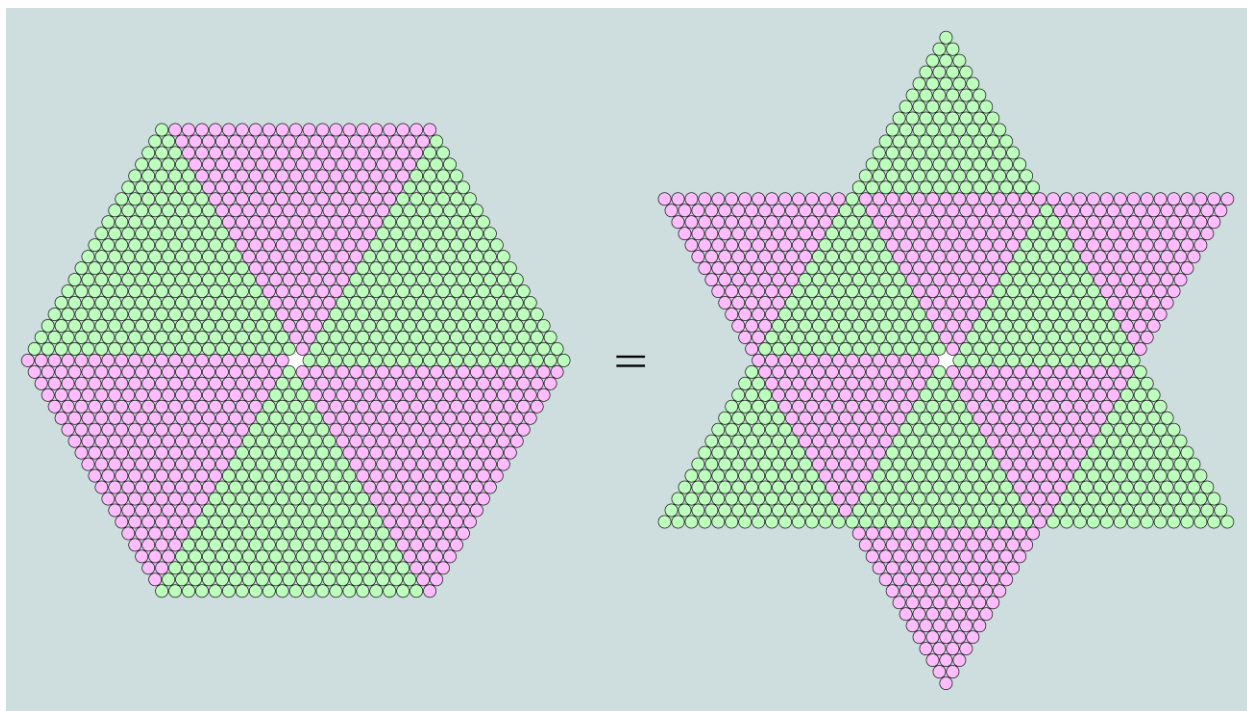
1261 as both numerical hexagon and hexagram

[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 hexagram 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 1261st – 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 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)]

The prologue to the Book of Job (Job 1,2) raises two fundamental questions: (1) Did these conversations between God and Satan really take place? And, (2) If so, how should we react to the fact that God sometimes responds to this petitioner's request with a ready, though qualified, approval?

In respect of (1), the theme of these monographs being the corroboration by rational argument of the Judeo-Christian Scriptures, of God's Being and Sovereignty and of the reality of the supernatural, there can be no reason to doubt that these conversations took place, that similar conversations have been taking place from the beginning, and will continue.

Regarding (2): this question touches on the meaning of our earthly lives and of God's eternal purposes. Whereas we now still see 'as through a glass darkly' (the numero-geometric revelations undoubtedly bringing some much needed light), our Creator alone sees the whole picture and knows what is needed to bring things to a proper conclusion. Satan's antipathy towards mankind is thus seen, ultimately, to fulfil a positive role. But this raises the further question, (3) Should we therefore expect there to be limits to the nature and magnitude of his requests? For example, is an issue intended to attack the wellbeing of a group of individuals – or, indeed, humanity at large – likely to be upheld? There would appear to be no good reason why it should necessarily fail!

What occurs to this author is the possibility that Satan has been allowed to perpetrate mass deception in respect of matters which directly contradict clear biblical statements. Words from 2Thessalonians appear to support this view, viz. "... they received not the love of the truth...(so) God shall send them strong delusion, that they should believe a lie." (2:10,11)

 Darwinism requires an exceedingly old earth; the Flood of Noah: a *local* deluge; an ongoing creation by evolution; ... - all contradicted by the words of Scripture!