

ARTICLE 58

**The First 10 Regular Polygons as the Geometrical
Analogue of the 10 Sephiroth of the Tree of Life**

by

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Abstract

The inner form of the Tree of Life consists of two sets of seven regular polygons, one set being the mirror image of the other. The polygon in either set that has the most corners is the dodecagon. As it is the tenth type of polygon, three types of polygons are absent from the inner Tree of Life. Previous articles have shown that its seven types of polygons encode information about how this blueprint manifests in holistic systems. If they formally correspond to the seven Sephiroth of Construction, this suggests that the three absent polygons may correspond to the three members of the Supernal Triad, so that the first 10 regular polygons correspond to the 10 Sephiroth. This article uncovers amazing evidence of design, i.e., conceptual coherence, rather than unconnected disorder, that supports this conjecture. Data is provided in the form of the geometrical and yod compositions of the first ten regular polygons. They are found to embody the fine-structure number 137 and the superstring structural parameters 168, 840 & 1680, as well as the dimension 496 of the two superstring gauge symmetry groups $SO(32)$ & $E_8 \times E_8$. In confirmation of their archetypal status, the three absent polygons embody in more abstract form information about the structure of superstrings and their unified forces that the seven polygons of the inner Tree of Life encode separately.

Table 1. Gematria number values of the ten Sephiroth in the four Worlds.

| | SEPHIRAH | GODNAME | ARCHANGEL | ORDER OF ANGELS | MUNDANE CHAKRA |
|----|--------------------------------|--|--|--|--|
| 1 | Kether (Crown) 620 | EHYEH (I am) 21 | Metatron (Angel of the Presence) 314 | Chaioth ha Qadesh (Holy Living Creatures) 833 | Rashith ha Gilgalim First Swirlings. (Primum Mobile) 636 |
| 2 | Chokmah (Wisdom) 73 | YAHWEH, YAH (The Lord) 26, 15 | Raziel (Herald of the Deity) 248 | Auphanim (Wheels) 187 | Masloth (The Sphere of the Zodiac) 140 |
| 3 | Binah (Understanding) 67 | ELOHIM (God in multiplicity) 50 | Tzaphkiel (Contemplation of God) 311 | Aralim (Thrones) 282 | Shabathai Rest. (Saturn) 317 |
| | Daath (Knowledge) 474 | | | | |
| 4 | Chesed (Mercy) 72 | EL (God) 31 | Tzadkiel (Benevolence of God) 62 | Chasmalim (Shining Ones) 428 | Tzadekh Righteousness. (Jupiter) 194 |
| 5 | Geburah (Severity) 216 | ELOHA (The Almighty) 36 | Samael (Severity of God) 131 | Seraphim (Fiery Serpents) 630 | Madim Vehement Strength. (Mars) 95 |
| 6 | Tiphareth (Beauty) 1081 | YAHWEH ELOHIM (God the Creator) 76 | Michael (Like unto God) 101 | Malachim (Kings) 140 | Shemesh The Solar Light. (Sun) 640 |
| 7 | Netzach (Victory) 148 | YAHWEH SABAOTH (Lord of Hosts) 129 | Haniel (Grace of God) 97 | Tarshishim or Elohim 1260 | Nogah Glittering Splendour. (Venus) 64 |
| 8 | Hod (Glory) 15 | ELOHIM SABAOTH (God of Hosts) 153 | Raphael (Divine Physician) 311 | Beni Elohim (Sons of God) 112 | Kokab The Stellar Light. (Mercury) 48 |
| 9 | Yesod (Foundation) 80 | SHADDAI EL CHAI (Almighty Living God) 49, 363 | Gabriel (Strong Man of God) 246 | Cherubim (The Strong) 272 | Levanah The Lunar Flame. (Moon) 87 |
| 10 | Malkuth (Kingdom) 496 | ADONAI MELEKH (The Lord and King) 65, 155 | Sandalphon (Manifest Messiah) 280 | Ashim (Souls of Fire) 351 | Cholem Yesodoth The Breaker of the Foundations. The Elements. (Earth) 168 |

(All numbers in this table that the article refers to are written in **boldface**).

The Sephiroth exist in the four Worlds of Atziluth, Beriah, Yetzirah and Assiyah. Corresponding to them are the Godnames, Archangels, Order of Angels and Mundane Chakras (their physical manifestation, traditionally symbolised by celestial bodies). This table gives their number values obtained by the ancient practice of gematria, wherein a number is assigned to each letter of the alphabet, thereby giving to a word a number value that is the sum of the numbers of its letters.

1. The 2nd-order Tetractys Pattern in the First 10 Polygons

The inner form of the Tree of Life comprises two similar sets of seven enfolded, regular polygons, one the mirror image of the other:

triangle, square, pentagon, hexagon, octagon, decagon & dodecagon.

The dodecagon is the *tenth* regular polygon, so that three polygons are absent from the inner Tree of Life: the 7-sided heptagon, the 9-sided nonagon & the 11-sided undecagon. They are shown coloured white in Figure 1, the seven other types of polygons belonging to the inner Tree of Life being coloured the seven

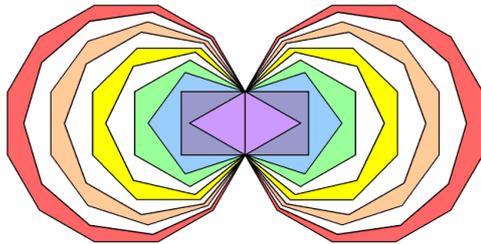


Figure 1. The first (10+10) enfolded polygons.

colours of the rainbow. This absence suggests the following analogy between the first 10 regular polygons and the 10 Sephiroth of the Tree of Life:

- the three types of "absent polygons" → three Sephiroth belonging to the Supernal Triad, which express the subjective, 3-fold aspect of God (the triple Godhead) and which stand outside all levels of reality;
- the seven types of polygons making up the inner Tree of Life → seven Sephiroth of Construction, which express the objective, 7-fold aspect of God and which manifest in His Creation.

Despite the fact that the geometry of overlapping circles that generates the inner Tree of Life (see [here](#)) does not create three of the first 10 regular polygons, these absent polygons, being analogous to the archetypal Supernal Triad as the source of all levels of existence, might be expected to have properties that are analogous to those found in the seven types of polygons, if this analogy between Sephiroth and polygons really holds. Let us now investigate whether this is true.

The number of corners of the n sectors of an n -gon = $n + 1$. The separate heptagon ($n=7$), nonagon ($n=9$) & undecagon ($n=11$) have 27 sectors with 30 corners. Enfolded, they have $(30-2-2=26)$ corners, the two mirror-image sets having **50** corners, where **26** is the number value of YAHWEH, the Godname of Chokmah, and **50** is the number value of ELOHIM, the Godname of Binah. These two Sephiroth head the Pillars, respectively, of Mercy and Judgement in the Tree of Life. As such, their Godnames prescribe the geometry of the three absent polygons in the simplest possible way. The seven separate polygons of the inner Tree of Life have **48** sectors with $(48+7=55)$ corners, where 55 is the *tenth* triangular number:

$$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55.$$

Figure 2 shows the first 10 polygons arranged in a tetractys, the numbers denoting their corners. As they are analogous to the three Sephiroth of the Supernal Triad, the three absent polygons are located at the

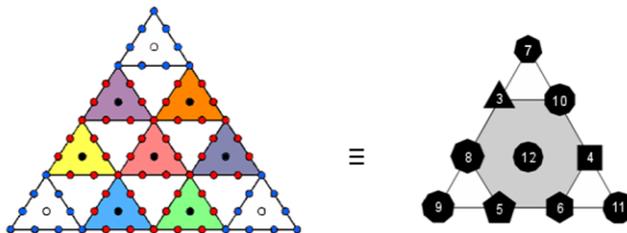


Figure 2. The 2nd-order tetractys character of the first 10 separate polygons.

| | | | | |
|---------|---|--|---|---|
| 85 yods | { | 3 ○ → 3 centres of 7-gon, 9-gon & 11-gon | } | 85 corners of 75 sectors of 1st 10 polygons |
| | | 27 ● → 27 corners of 7-gon, 9-gon & 11-gon | | |
| | | 7 ● → 7 centres of 7 polygons | | |
| | | 48 ● → 48 corners of 7 polygons | | |

corners of the tetractys. The dodecagon occupies its centre because, as the last of the polygons making up the inner Tree of Life, it corresponds to Malkuth, the final Sephirah of Construction. The two triplets of polygons: (triangle, square, pentagon) & (hexagon, octagon, decagon) correspond to the two triads of

Sephiroth of Construction: Chesed-Geburah-Tiphareth & Netzach-Hod-Yesod (Fig. 3). The 10 separate polygons have $(27+48=75)$ sectors with $(30+55=85)$ corners. This is the number of yods making up the 10 tetractyses in a 2nd-order tetractys. Moreover, the tetractyses at its three corners contain 30 yods, the seven other tetractyses containing 55 yods. The former are analogous to the 30 corners of the sectors of the three absent polygons and the latter are analogous to the 55 corners of the seven polygons in the inner Tree of Life.

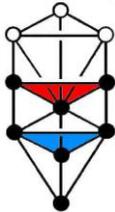


Figure 3. The two triads of Sephiroth of Construction.

The white centres of the three corner tetractyses correspond to the centres of the three absent polygons, their 27 blue yods correspond to the 27 corners of the latter, the seven black centres of the seven coloured tetractyses correspond to the centres of the seven polygons and their **48** red yods correspond to the **48** corners of these polygons (the six red corners of the hexagon and the 42 red hexagonal yods correspond to the 42 corners of the six other polygons). We see from these detailed correspondences that the 2nd-order tetractys

symbolizes the first 10 polygons, with that part of it corresponding to the Supernal Triad symbolizing the three absent polygons and that part corresponding to the seven Sephiroth of Construction symbolizing the seven types of polygons in the inner Tree of Life. Here is mathematical confirmation that an analogy between the 10 Sephiroth of the Tree of Life and the first 10 types of polygons does, indeed, exist; there are far too many correspondences to be attributable, plausibly, to chance.

2. Properties of the First 10 Polygons

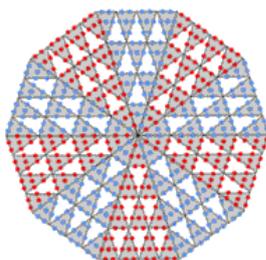
Tabulated below are the geometrical compositions of the 10 Type A polygons, the three absent Type A polygons and the seven Type A polygons of the inner Tree of Life (numbers in brackets refer to both sets):

Table 1. Geometrical composition of the 3, 7 & first 10 Type A polygons.

| | 10 polygons | | 3 absent polygons | | 7 polygons | |
|----------------------------------|--------------------|-------------------|-------------------|-------------------|----------------|------------------|
| | separate | enfolded | separate | enfolded | separate | enfolded |
| Number of corners of sectors (C) | 85 (170) | 65 (128) | 30 (60) | 26 (50) | 55 (110) | 41 (80) |
| Number of sides of sectors (S) | 150 (300) | 139 (277) | 54 (108) | 52 (103) | 96 (192) | 88 (175) |
| Number of sectors (T) | 75 (150) | 74 (148) | 27 (54) | 27 (54) | 48 (96) | 47 (94) |
| Number of geometrical elements | 310 (620) | 278 (553) | 111 (222) | 105 (207) | 199 (398) | 176 (349) |

Comments

1. The Godname EL of Chesed with number value **31** prescribes the geometrical composition of the 10 separate polygons because they have 310 $(=31 \times 10)$ corners, sides & triangles. Both sets of 10



310 ●
310 ●

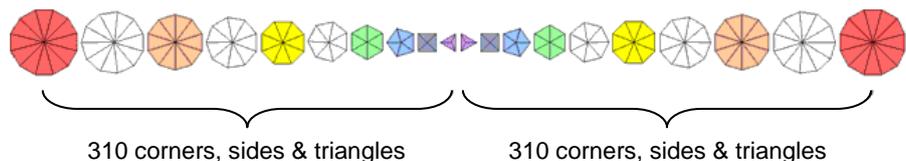


Figure 4. The number value **620** of Kether is the number of hexagonal yods in the 10-sided decagon with 2nd-order tetractyses as its sectors. It is also the number of geometrical elements in the first $(10+10)$ separate, regular polygons.

separate polygons have **620** geometrical elements. **620** is the number of Kether ("Crown") (Fig. 4).

2. The first $(10+10)$ enfolded polygons have 553 geometrical elements, i.e., 550 elements outside their shared side. This is remarkable for two reasons: 1. $550 = 10(1+2+3+4+5+6+7+8+9+10)$, i.e., the Decad determines the geometrical composition of the first $(10+10)$ enfolded polygons; 2. the number of SLs in the Cosmic Tree of Life is 550 (see [here](#)). Embodied, therefore, in the geometrical composition of the first $(10+10)$ enfolded polygons is CTOL! It is the polygonal counterpart of the 550 geometrical elements in the faces of the five Platonic solids (see [here](#));

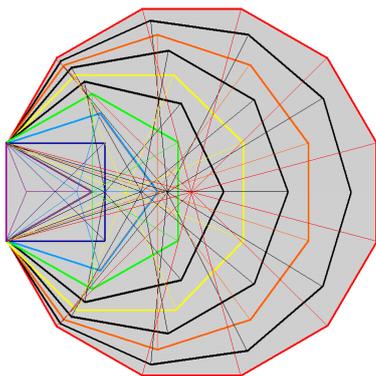


Figure 5. The 74 sectors of the first 10 enfolded polygons.

3. Figure 5 shows the 74 sectors of the first 10 enfolded polygons (the sectors of the three absent polygons have black sides). They have **65** corners, where **65** is the number value of ADONAI, the Godname of Malkuth, and the sum of the first 10 integers after 1:

$$\begin{array}{c}
 2 \\
 3 \ 4 \\
 \mathbf{65} = 5 \ 6 \ 7 \\
 8 \ 9 \ 10 \ 11 .
 \end{array}$$

ADONAI prescribes the lowest 10 overlapping Trees of Life because they have **65** SLs (see [here](#)), so it is highly appropriate that it should determine the geometrical *form* of the first 10 enfolded polygons. They also have **65** sides outside their shared side. Both sets of 10 enfolded polygons have

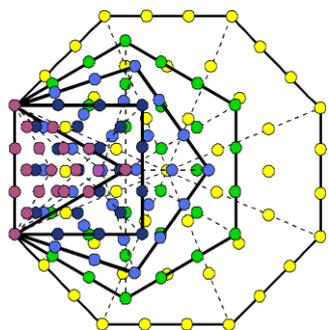


Figure 6. The first 5 enfolded polygons of the inner Tree of Life have 139 yods.

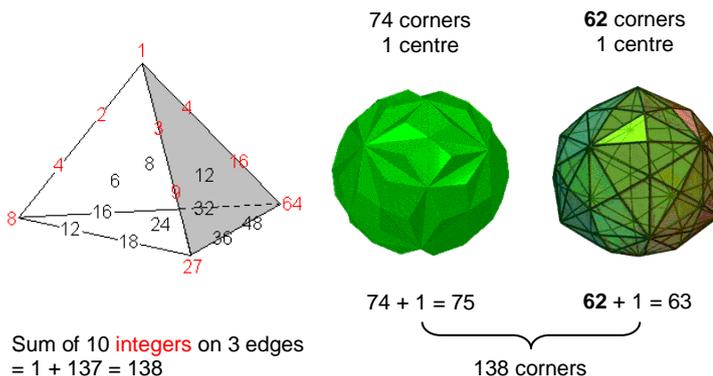


Figure 7. The sum of the integers on the rising edges of the Tetrahedral Lambda is the number of corners of internal triangles creating edges of the two polyhedra in the Polyhedral Tree of Life.

(**65+1+65=131**) sides, where **131** is the number value of *Samael*, the Archangel of Geburah. The sectors of the 10 enfolded polygons have 139 sides. Remarkably, this is the number of yods in the first

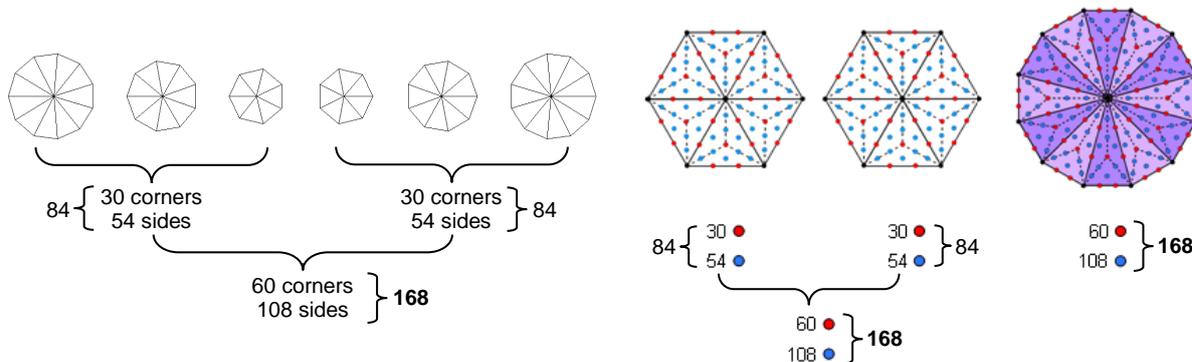
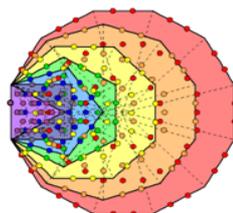
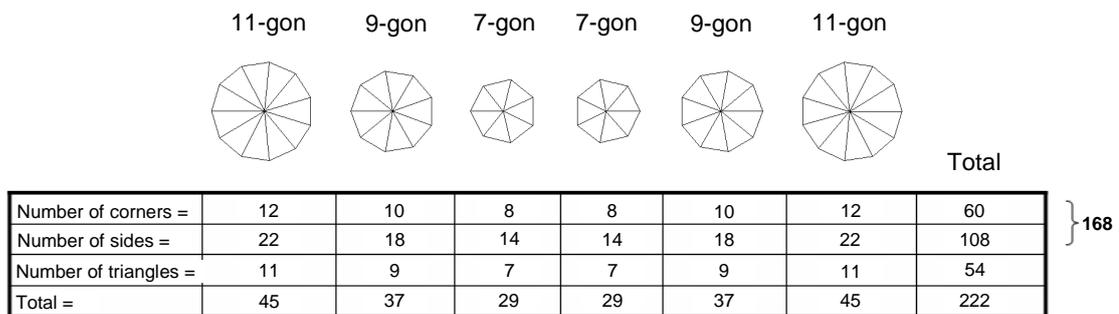


Figure 8. The (30+30) corners & (54+54) sides of the (27+27) sectors of the (3+3) separate, absent polygons correspond to distributions of yods in the pair of Type B hexagons and in the Type B dodecagon.

five enfolded polygons of the inner Tree of Life (Fig. 6). The first 10 enfolded polygons are *shaped* by 138 straight lines extending on either side of their shared side. This number is embodied in the **Tetrahedral Lambda** as the sum of the 10 integers (coloured red) arranged on the three sloping edges of the tetrahedral array of 20 integers (Fig. 7). (Integers at centres of faces are omitted for the sake of clarity). If the vertices of the two polyhedra making up the **Polyhedral Tree of Life** are joined to their centres, their resulting 396 internal triangles have 138 corners. Two sides of each hexagon in the inner Tree of Life are sides of triangles in the outer Tree of Life, forming their side pillars, so that the first 10 enfolded polygons have 74 sectors with 137 sides that are intrinsic to them. Here is another way in which they embody the fine-structure number 137.

- The 27 sectors of the three separate, absent polygons have $(30+54=84)$ corners & sides, so that the 54 sectors in both sets of these polygons have **168** corners & sides (Fig. 8). Their shapes are determined by the number of *Cholem Yesodoth*, the Mundane Chakra of Malkuth. Here is how the geometry of the three absent polygons embody the number that determines the structure of each of the 10 toroidal vortices making up a subquark superstring, namely, the **168** turns in one revolution of a helical whorl of the UPA. It is so plain and intuitively natural that it leaves no doubt about the archetypal nature of this geometry. It is reproduced in the pair of separate Type B hexagons and in the Type B dodecagon as the $(84+84=168)$ yods needed to transform their sectors into Type A triangles.

Their $(30+30)$ corners are symbolised by the $(30+30)$ red yods in the tetractys sectors and their $(54+54)$ sides are symbolised by the $(54+54)$ blue yods added by converting the sectors into Type A triangles. Enfolded, the $(3+3)$ separate, absent polygons have $(50+103=153)$ corners & sides, where **153** is the number value of ELOHIM SABAOTH. The Godname ELOHIM with number value **50** prescribes their **50** corners and SABAOTH with number value **103** prescribes their **103** sides. The



222 hexagonal yods are associated with the 7 enfolded polygons.

Figure 9. The $(3+3)$ absent polygons have as many geometrical elements as there are hexagonal yods associated with each set of 7 enfolded polygons in the inner Tree of Life.

division of these **50** corners into the two endpoints of the shared side and the $(24+24=48)$ corners outside it is characteristic of holistic systems (see [here](#));

- The $(3+3)$ separate, absent polygons have 222 geometrical elements. This is the number of hexagonal yods associated with each set of seven enfolded polygons when their 47 sectors are tetractyses (Fig. 9). (See also [#12](#)). It is also the number of permutations of the rows of yods in the three orientations of a tetractys (see [here](#)). Notice that each orientation generates 74 permutations of the three rows of yods, where 74 is the number of sectors of the 10 enfolded polygons. This is also the number of vertices in the "144 Polyhedron" (see second diagram in comment (3)).
- The 10 enfolded polygons have 55 corners that do not coincide with centres of polygons, where

$$55 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10:$$

The three enfolded, absent polygons have **21** corners outside their shared side and the seven enfolded polygons of the inner Tree of Life have 34 corners that are not also centres. **21**, **34** & **55** are three, successive members of the Fibonacci series that governs the growth patterns of many living things:

0, 1, 1, 2, 3, 5, 8, 13, **21**, 34, 55, 89, 144,

See [Article 50 \(Part 1\)](#) & [Article 50 \(Part 2\)](#) for how Fibonacci numbers manifest in various sacred geometries.

Tabulated below in Table 2 are the yod populations of the 10 polygons, the three absent polygons and the seven polygons of the inner Tree of Life when constructed from tetractyses (numbers in brackets refer in each case to both sets):

Table 2. Yod populations of the 3, 7 & first 10 Type A polygons.

| | 10 polygons | | 3 absent polygons | | 7 polygons | |
|---|-------------|-----------------|-------------------|------------------|------------|------------------|
| | separate | enfolded | separate | enfolded | separate | enfolded |
| Number of corners of sectors = C | 85 (170) | 65 (128) | 30 (60) | 26 (50) | 55 (110) | 41 (80) |
| Number of hexagonal yods = 2S + T | 375 (750) | 352 (702) | 135 (270) | 131 (260) | 240 (480) | 223 (444) |
| Number of yods on sides of tetractyses = C + 2S | 385 (770) | 343 (682) | 138 (276) | 130 (256) | 247 (494) | 217 (430) |
| Number of yods = C + 2S + T | 460 (920) | 417 (830) | 165 (330) | 157 (310) | 295 (590) | 264 (524) |

Comments

1. The 10 enfolded polygons have 352 hexagonal yods. i.e., 350 hexagonal yods outside their shared side. This is both the number of hexagonal yods on the sides of the 94 tetractyses making up the (7+7) enfolded polygons and the sum of the 20 integers in the Tetrahedral Lambda (see Fig. 7 [here](#)). There are **351** hexagonal yods associated with each set of 10 enfolded polygons, where

$$351 = 1 + 2 + 3 + \dots + 26$$

is the number value of *Ashim*, the Order of Angels assigned to Malkuth. This shows in a very direct,

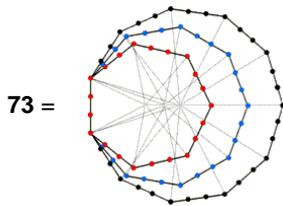


Figure 10. The three enfolded, absent polygons and the Type A dodecagon embody the number **73** of Chokmah.

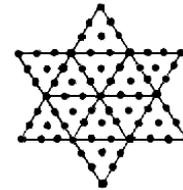
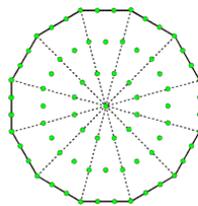


Figure 11. The Star of David representation of the number **73** of Chokmah (“Wisdom”).

unmistakable way how YAHWEH, the Godname of Chokmah with number value **26**, prescribes the hexagonal yod population of the 10 enfolded polygons. It also prescribes the **26** corners of the three enfolded, absent polygons. Indeed, there are **73** yods on their sides, where **73** is the number of Chokmah (Fig. 10). This is the number of yods in the 12 tetractyses needed to construct the Star of

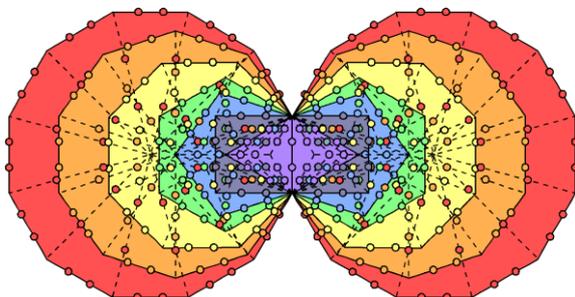


Figure 12. 350 hexagonal yods line the 94 tetractyses in the (7+7) enfolded polygons.

David (Fig. 11). Furthermore, YAHWEH prescribes the hexagonal yod population of the (3+3) enfolded, absent polygons, which have 260 (=26x10) hexagonal yods. The three enfolded, absent polygons have **131** hexagonal yods, where **131** is the number value of *Samael*, the Archangel of Geburah. **129** hexagonal yods are outside their shared side, where **129** is the number value of YAHWEH SABAOTH, the Godname of Netzach. There are 702 hexagonal yods on the sides of the tetractyses in the (10+10) enfolded polygons. 350 (=35x10) hexagonal yods are distributed on either side of the root edge. This 35:35 division is characteristic of holistic systems, e.g., the 70 yods of the

Tree of Life are composed of 35 yods in its trunk and 35 yods in its branches (see [here](#)). Amazingly, the (7+7) enfolded Type A polygons have 350 hexagonal yods on the sides of their 94 tetractyses (Fig. 12). This demonstrates once again the holistic character of the (10+10) polygons;

- There are 385 yods on the sides of the 75 tetractys sectors of the first 10 separate polygons, where

$$385 = 1^2 + 2^2 + 3^2 + 4^2 + 5^2 + 6^2 + 7^2 + 8^2 + 9^2 + 10^2.$$

(Fig. 13). 138 yods line the 54 sides of the 27 tetractys sectors of the three separate, absent polygons. Compare this with the fact discussed in (3) above that the 74 sectors of the 10 enfolded polygons

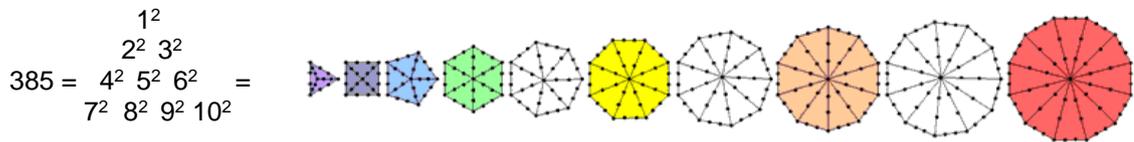
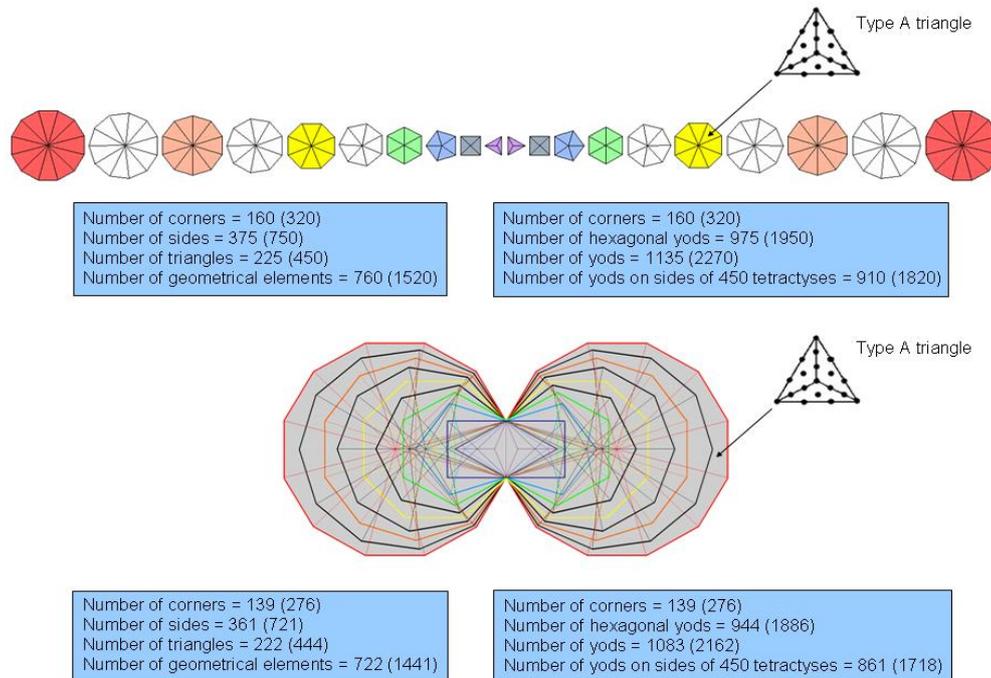


Figure 13. 385 yods line the 75 sectors of the first 10 separate, regular polygons.

have 138 sides outside their shared side. The same number measures the yods in two joined, Type A dodecagons outside their shared side. The Tetrad (4) determines the 256 yods lining the 54 tetractyses in the (3+3) enfolded, absent polygons because $256 = 4^4$;

- The first 10 separate polygons contain 460 ($=46 \times 10$) yods, where 46 is the number of yods in a Type B Triangle. As the average yod population of the first 10 polygons, the number 46 is well-known as the



(numbers in brackets refer to both sets of 10 polygons)

Figure 14. Properties of the first (10+10) Type B polygons.

number of chromosomes in the human cell. The first (10+10) separate polygons contain 920 yods, so that 900 ($=90 \times 10$) yods surround their centres. The number 90 is the sum of the 10 integers in the Lambda Tetractys and is shown in many analyses on the author's website to be embodied in sacred geometries. Its manifestation here is no coincidence, of course, because of the holistic nature of the first 10 polygons. The three separate, absent polygons contain 165 yods, where

$$165 = 1^2 + 3^2 + 5^2 + 7^2 + 9^2.$$

The three enfolded, absent polygons contain 157 yods, i.e., **153** yods outside their shared side, where **153** is the number value of ELOHIM SABAOTH, the Godname of Hod. The (3+3) enfolded, absent polygons contain 310 ($=31 \times 10$) yods, where **31** is the number value of EL, the Godname of Chesed. How appropriate that this Godname, which translates as "God," prescribes the yod population of those polygons which correspond to the Supernal Triad, the triple Godhead! How also appropriate that **155** yods are associated with each set of three polygons, for **155** is the number value of ADONAI

MELEKH, the complete Godname of Malkuth! This number, truly, quantifies the form of the three absent polygons. Its geometrical representation is discussed [here](#).

Now consider the case where all the polygons are Type B (Fig. 14). Tabulated below in Table 3 are the geometrical compositions of the 10 Type B polygons, the three absent Type B polygons and the seven Type B polygons of the inner Tree of Life (numbers in brackets refer to both sets):

Table 3. Geometrical composition of the 3, 7 & first 10 Type B polygons.

| | 10 polygons | | 3 absent polygons | | 7 polygons | |
|----------------------------------|-------------|------------|-------------------|-----------|------------------|--------------------|
| | separate | enfolded | separate | enfolded | separate | enfolded |
| Number of corners of sectors (C) | 160 (320) | 139 (276) | 57 (114) | 53 (104) | 103 (206) | 88 (174) |
| Number of sides of sectors (S) | 375 (750) | 361 (721) | 135 (270) | 133 (265) | 240 (480) | 229 (457) |
| Number of sectors (T) | 225 (450) | 222 (444) | 81 (162) | 81 (162) | 144 (288) | 141 (282) |
| Number of geometrical elements | 760 (1520) | 722 (1441) | 273 (546) | 267 (531) | 487 (974) | 458 (913) |

Comments

1. The 10 separate polygons have 760 (=76×10) geometrical elements. They are prescribed by YAHWEH ELOHIM, the Godname of Tiphareth with number value **76**. (760–30=730=73×10) geometrical elements are outside the sides that become shared when they are enfolded. The 10 enfolded polygons have 139 corners, i.e., 137 corners outside their shared side determine their shapes, where 137 is the number whose reciprocal is approximately the **fine-structure constant**. This number is embodied in the (5+5) enfolded polygons shown in Figure 6 as the 137 yods associated with each set. Alternatively, as the topmost corner of the hexagon coincides with the lowest corner of the hexagon enfolded in the next higher Tree of Life, 137 corners *intrinsic* to the 10 enfolded polygons are associated with each set of 10 enfolded polygons. The latter are displayed below in Figure 15 (notice there is no green yod at the top of the two hexagons):

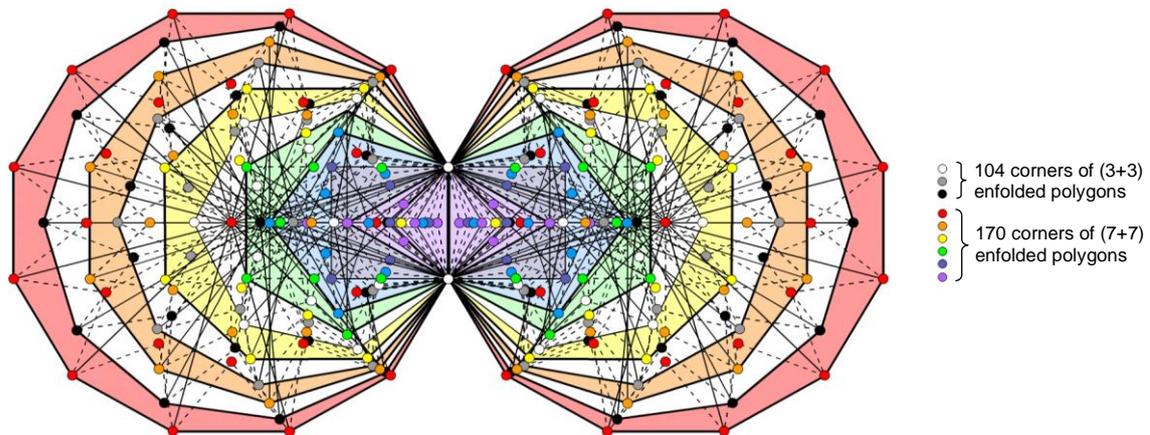


Figure 15. 137 corners are intrinsic to each set of 10 enfolded polygons. 137 is the 33rd prime number, where $33 = 1! + 2! + 3! + 4!$.

Enfolded, they have 361 sides, where $361 = 19^2$, i.e., the square of the *tenth* odd integer. ELOHA, the Godname of Geburah with number value **36**, determines their 360 (=36×10) sides outside their shared side;

2. The (10+10) enfolded polygons have 444 triangles. This is the number of hexagonal yods in the (7+7) enfolded Type A polygons (see last diagram [here](#)). Symbolised, therefore, in the inner form of the Tree of Life are the number of triangular sectors in the (10+10) enfolded Type B polygons;
3. The three enfolded polygons have 267 geometrical elements, i.e., 264 elements outside their shared side. This is the number of yods in the seven enfolded Type A polygons;
4. The 10 enfolded polygons have 500 (=50×10) corners & sides. ELOHIM, the Godname of Binah with number value **50**, prescribes their shape. As their shared side consists of two endpoints and one line, there are 497 corners & sides outside the root edge. In the context of overlapping Trees of Life where each Tree has its own set of (7+7) enfolded polygons, if we now consider the hidden (3+3) polygons

accompanying each set, there are **496** geometrical elements that are *intrinsic* to each set of 10 enfolded polygons because the topmost corner of the hexagon coincides with the lowest corner of the hexagon enfolded in the next higher Tree of Life and so is shared with the polygons enfolded in this Tree. This number is the number value of Malkuth. Embodied in the 10 enfolded polygons is the dimension of SO(32) and $E_8 \times E_8$, the two gauge symmetry groups that permit interactions between superstrings that are free of **quantum anomalies**;

- As the three enfolded polygons have **26** corners, there are (500–**26**=**474**) corners & sides other than these in the 10 enfolded polygons. **474** is the number of Daath (“knowledge”).

Tabulated below in Table 4 are the yod populations of the 10 Type B polygons, the three absent Type B polygons and the seven Type B polygons of the inner Tree of Life (numbers in brackets refer in each case to both sets):

Table 4. Yod populations of the 3, 7 & first 10 Type B polygons.

| | 10 polygons | | 3 absent polygons | | 7 polygons | |
|---|-------------|-------------|-------------------|-----------|------------------|------------|
| | separate | enfolded | separate | enfolded | separate | enfolded |
| Number of corners of tetractyses = C | 160 (320) | 139 (276) | 57 (114) | 53 (104) | 103 (206) | 88 (174) |
| Number of hexagonal yods = 2S + T | 975 (1950) | 944 (1886) | 351 (702) | 347 (692) | 624 (1248) | 599 (1196) |
| Number of yods on sides of tetractyses = C + 2S | 910 (1820) | 861 (1718) | 327 (654) | 319 (634) | 583 (1166) | 546 (1088) |
| Number of yods = C + 2S + T | 1135 (2270) | 1083 (2162) | 408 (816) | 400 (796) | 727 (1454) | 687 (1370) |

Comments

- YAHWEH with number value **26** prescribes the **351** hexagonal yods in the three separate, absent polygons because

$$351 = 1 + 2 + 3 + \dots + 26;$$

- There are 910 (=91×10) yods on the sides of the 225 tetractyses in the 10 separate polygons. Embodied in the number quantifying the boundaries of their tetractyses is the number (91) of Trees of Life in the **Cosmic Tree of Life**. The (10+10) separate polygons have 1820 such yods on the boundaries of their 450 tetractyses. Remarkably, this is the number of yods surrounding the centres of the five Platonic solids when their faces are constructed from tetractyses and their interior triangles meeting at their centres are Type A (see Table 1 in **Article 3**);
- The number of yods in the (10+10) separate polygons = 2270 = 227×10. This shows how EL ChAI, the Godname of Yesod with number value **49**, prescribes the (10+10) separate polygons, as 227 is the **49th** prime number;
- The number of yods in the (10+10) enfolded polygons = 2162 = 2×**1081**. Amazingly, the number value **1081** of Tiphareth ("Beauty") is the number of yods associated with each set of the first 10 enfolded polygons! As

$$1081 = 1 + 2 + 3 + \dots + 46,$$

the *simplest* Type B polygon — the triangle — embodies this number arithmetically because it has 46 yods. It is remarkable that the number of Tiphareth should measure the yods associated with the 10 enfolded polygons, whilst the number of its Godname should measure the number of points, lines & triangles in the 10 separate polygons. It would be tantamount to believing in miracles to dismiss this as a coincidence. Instead, this property is an eloquent expression of the beautiful power and intelligence of genuine sacred geometries. It reveals the way in which the true meaning of the word 'sacred' transcends all cultural contexts, whatever religion in which these geometries originate (and even if it was inspired by no religion). According to Table 4, there are 1088 yods on the sides of the **282** tetractyses in the (7+7) enfolded polygons. The topmost corners of the two hexagons coincide with the lowest corners of the hexagons enfolded in the next higher Tree of Life. Hence, 1086 boundary yods are intrinsic to each set of (7+7) enfolded polygons, i.e., 1082 intrinsic, boundary yods are outside the root edge. 1082 is the **1081st** integer after 1, once again showing how the number of Tiphareth determines the *shape* of the inner Tree of Life;

- The first 10 enfolded Type B polygons have 222 tetractys sectors with 139 corners, i.e., 137 corners outside their root edge. *The number determining the fine-structure constant shapes the first 10 enfolded Type B polygons as the number of points marking out their corners outside their shared side.* This property is analogous to the 139 yods in the first five enfolded polygons shown in Figure 6;
- The first 10 enfolded polygons have 944 hexagonal yods. 222 of them are at the centres of the 222 tetractyses, leaving 722 hexagonal yods lining their sides. 720 of these are outside the root edge.

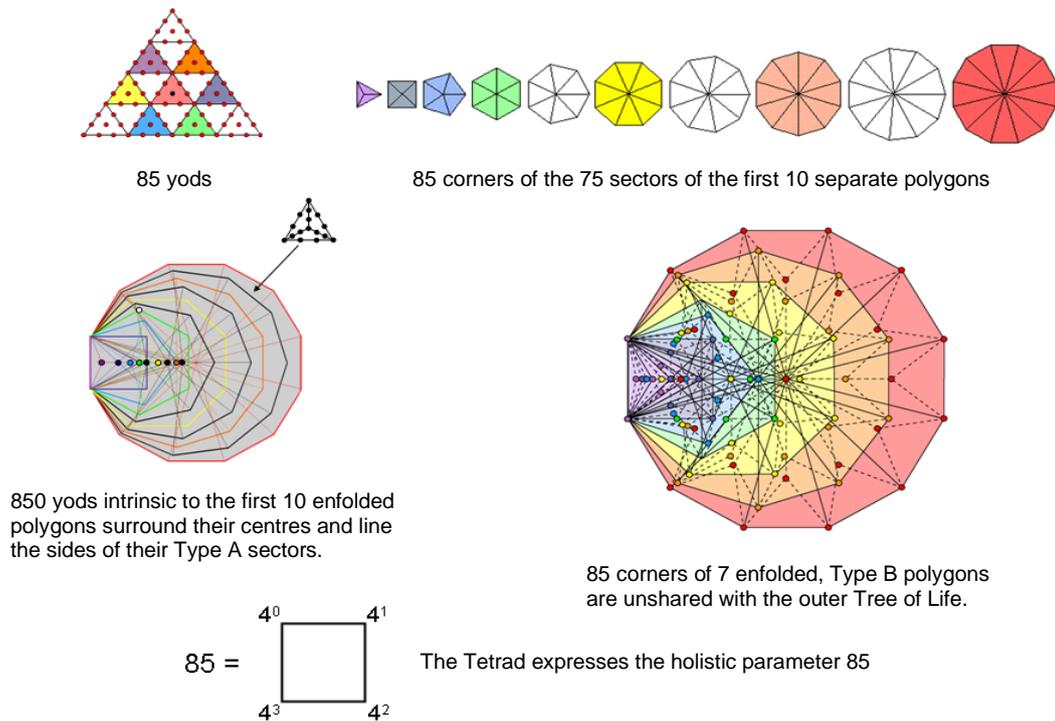


Figure 16. The first 10 enfolded Type B polygons embody the holistic parameter 85.

Hence, $(137+720=857)$ such yods line their sides. Including the four yods of the root edge, $(4+857=861)$ yods line their sides. Surrounding the 10 centres of the polygons are 851 boundary yods. One of them (indicated by a white yod in Figure 16) is the topmost corner of the hexagon, which coincides with the lowest corner of the hexagon enfolded in the next higher Tree of Life. This is the only corner which is shared with polygons enfolded in the next higher Tree, so that $850 (=85 \times 10)$

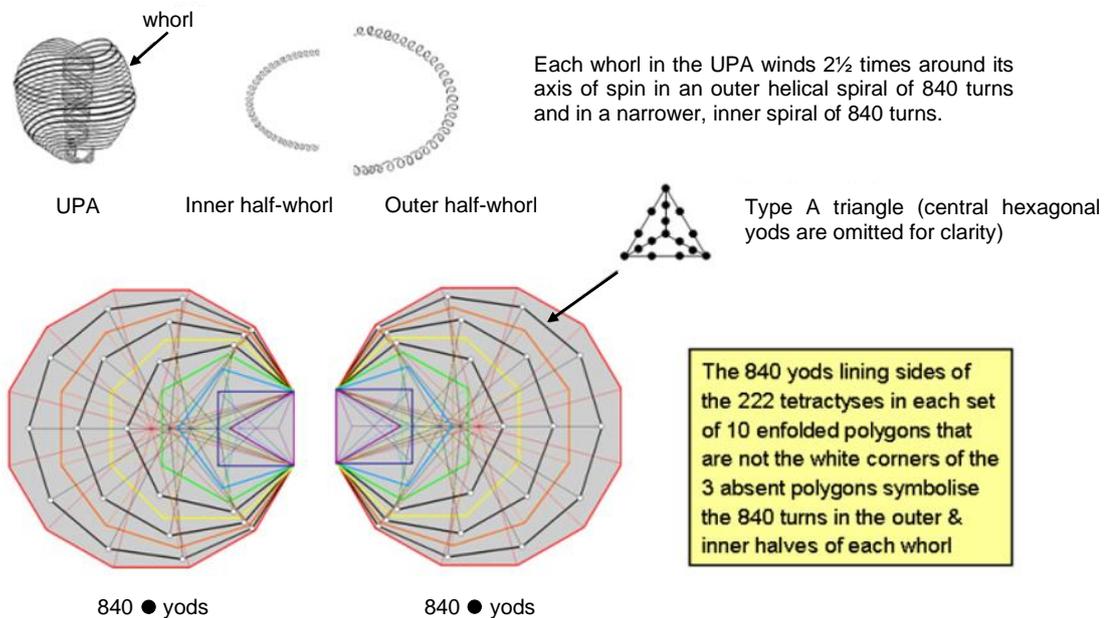


Figure 17. The 840 yods lining tetractyses in the 10 enfolded Type B polygons that are not corners of the three absent polygons symbolize the 840 turns in the outer & inner halves of each whorl of the UPA/subquark superstring.

boundary yods *intrinsic* to the 10 polygons enfolded in any Tree of Life surround their centres. This demonstration that they embody the holistic parameter 85, which was encountered earlier as the 85 corners of the first 10 separate polygons (see Fig. 2) is further evidence of their holistic character;

7. Of the 857 yods outside the root edge that line sides of 222 tetractyses, 24 yods are corners of the 27 sectors of the three types of polygons absent from the inner Tree of Life. $(857-24=833)$ yods other than these corners line the sides of the tetractyses making up the 10 enfolded Type B polygons. **833** is the number value of *Chaioth ha Qadesh* ("Holy Living Creatures"), the Order of Angels assigned to Kether;
8. Of the 857 boundary yods outside the root edge, **21** yods are corners of the three enfolded polygons, where **21** is the number value of EHYEH, the Godname of Kether. $(857-21=836)$ yods outside the root edge line tetractyses that are not corners of the three polygons that were hypothesized at the beginning of this article to correspond to Kether, Chokmah & Binah. Including the root edge, $(836+4=840)$ yods other than these corners line sides of 222 tetractyses (Fig. 17). Embodied in the 10 enfolded polygons is the superstring structural parameter 840 — the number of turns in an outer or inner half of each whorl of the UPA remote-viewed by Annie Besant & C.W. Leadbeater over a century ago and identified by the author as the subquark state of the $E_8 \times E_8$ heterotic superstring (see his books on his website). This property is the full expression of the 84 corners & sides of the three

206 hexagonal yods on sides of **148** sectors of (3+3) enfolded, absent polygons + 1680 hexagonal yods → 1886 hexagonal yods in first (10+10) enfolded polygons

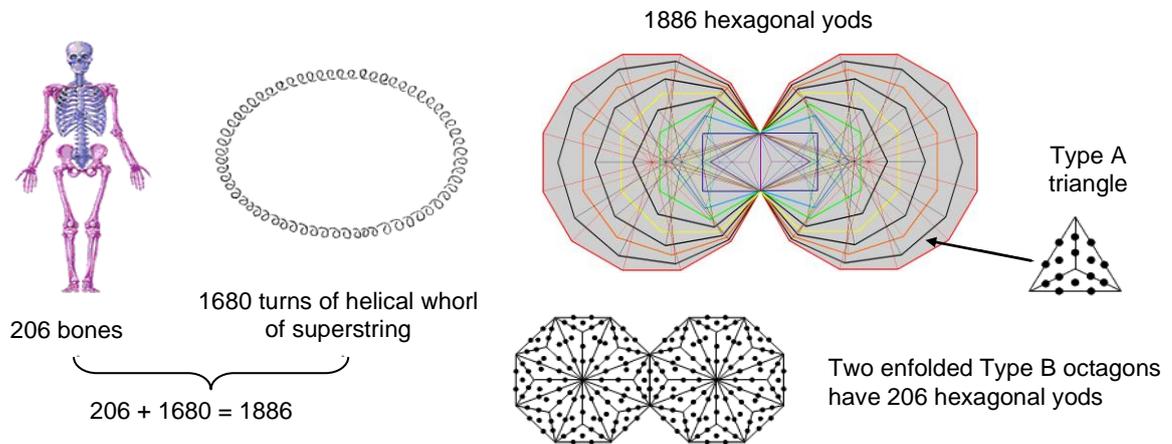


Figure 18. The analogy between the human skeleton, the superstring whorl and the 3:7 distinction between the first (10+10) enfolded Type B polygons.

separate Type A polygons that are absent from the inner Tree of Life, as shown in Figure 8. Notice that the $(21+21=42)$ corners of the (3+3) enfolded polygons outside their shared side play no part in determining this number. It is the geometrical realization of the fundamental, metaphysical dichotomy between the Supernal Triad, which exist outside all levels of reality, and the seven Sephiroth of Construction, which express these realities (actually, the seven cosmic planes of consciousness mapped by the **Cosmic Tree of Life**).

9. The (10+10) enfolded polygons contain 1886 hexagonal yods. According to Table 1, the 54 sectors of the (3+3) enfolded polygons have **103** sides, where **103** is the number of SABAOTH ("Hosts"), part of the Godnames of Hod & Netzach. 206 hexagonal yods line the sides of their sectors. Hence, $(1886-206=1680)$ extra hexagonal yods are needed to turn the **148** sectors of the (10+10) enfolded Type A polygons into the 444 tetractyses making up the (10+10) Type B polygons. 1680 yods line the sides of the two separate sets of 10 enfolded Type B polygons and 1680 hexagonal yods (840 hexagonal yods in each set) have to added to the (3+3) enfolded Type A polygons in order to generate the (10+10) enfolded Type B polygons. This reveals how they embody the superstring structural parameter 1680. There are $(148+10+10=168)$ corners inside the boundaries of all the polygons, showing how they embody the number of *Cholem Yesodeth*, the Mundane Chakra of Malkuth. The following, remarkable relationship emerges:

1886 hexagonal yods = 206 hexagonal yods + 1680 hexagonal yods.

The human skeleton has 206 bones and a helical whorl of the UPA/superstring has 1680 turns. It is, of course, meaningless to add together such different entities as bones and polarised oscillations of a **vortex ring** — a component of the superstring. However, this is not the point. It cannot be regarded as

merely a curious coincidence, for both numbers have definite geometrical meanings in the context of the geometry of the first 10 polygons, namely, 206 hexagonal yods lining sides of the 54 sectors of the (3+3) enfolded Type A polygons absent from the inner Tree of Life and 1680 hexagonal yods added by the conversion of the (10+10) enfolded polygons into Type B polygons (Fig. 18). The division stems from the basic distinction between the Supernal Triad (the triple Godhead) and the seven Sephiroth of Construction. What is remarkable is that the primary, structural parameters of the human body and the whorl should add up to the number of hexagonal yods in the (10+10) enfolded, Type B polygons. Holistic parameters can be composed of several other holistic parameters, each having its own context that is not necessarily inter-related to the others. The number 206 is also embodied in the two enfolded, Type B octagons because they contain 206 hexagonal yods (see Fig. 18). This means that the other (9+9) enfolded polygons contain 1680 hexagonal yods, each set of nine polygons having 840 hexagonal yods outside their shared, root edge. As a Type A octagon contains **49** yods (see [here](#)), EL ChAI, the Godname of Yesod with number value **49**, can be said to prescribe the number of circularly polarised oscillations in the vortex ring, or toroidal vortex, that is a whorl of the UPA/subquark superstring.