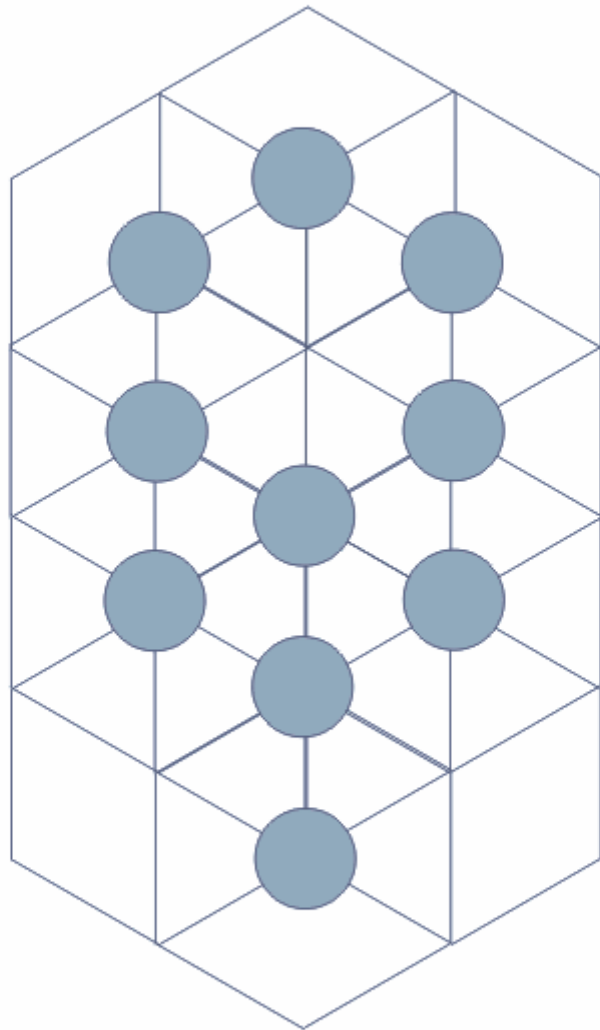


*The Hexagonal Geometry
of the Tree of Life*



*By Patrick Mulcahy
2008*

The Hexagonal Geometry Of the Tree of Life

By Patrick Mulcahy

This short treatise explores (using polyhex mathematics) the special relationship that exists between the kabbalistic Tree of Life diagram and the geometry of the simple hexagon. It reveals how the ten sefirot and the twenty-two pathways of the Tree of Life are each individually and uniquely linked to the hexagonal form. The Hebrew alphabet is also shown to be esoterically associated with the geometry of the hexagon.

This treatise is intended to be a primer for the further study and esoteric application of polyhex mathematics.

First Edition (Expanded)

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Table of Contents

Preface.....	6
General Introduction.....	7
Introduction to the Polyhex Tree of Life	9
The Polyhex Tree of Life	13
The Three Highest Sefirot.....	13
The Seven Lower Sefirot.....	15
The Malkut Tetrahex	16
The Holy Name.....	19
The Twenty-two Pathways	19
The Shin Pentahex.....	20
Towards A Pentahex Alphabet	22
The Twelve Simple Pentahexes.....	25
Pentahex Word Forms.....	29
Constructing Polyhex Tree of Life Mandalas.....	32
Introduction	32
A Tree of Life Hexagonal Mandala (34 Polyhexes)	33
Tree of Life Sefirotic Mandalas (10 Polyhexes).....	37
A Tree of Life ‘Snowflake’ Mandala (32 Polyhexes).....	38
One Hundred and Forty-seven Hexagons	40
Closer to the Tree of Life	48
A Pentahex Hexagonal Mandala (22 Pentahexes).....	49
A Pentahex Triangular Mandala (22 Polyhexes).....	50
A Pentahex Hexagonagram (22 Polyhexes).....	51
Polyhex Divination	53

List of Illustrations

FIGURE 1: THE HEXAGONAL POSITIONING OF THE TEN SEFIROT	7
FIGURE 2: THE MONOHEX & THE DIHEX	8
FIGURE 3: THE THREE TRIHEXES.....	8
FIGURE 4: THE TWO PRIMORDIAL VEILS	10
FIGURE 5: THE THREE TRIHEX SEFIROT	10
FIGURE 6: THE SEVEN TETRAHEX SEFIROT	11
FIGURE 7: THE TWENTY-TWO PENTAHEXES	12
FIGURE 8: THE SINGLE HEXAHEX CONTAINING A HOLE	13
FIGURE 9: THE FIRST THREE SEFIROT OF THE TREE OF LIFE.....	14
FIGURE 10: THE POLYHEX TREE OF LIFE	15
FIGURE 11: TWO EXAMPLES OF TETRAHEXES TILING THE PLANE	16
FIGURE 12: THE MALKUT TETRAHEX TILING THE PLANE.....	17
FIGURE 13: THE BINAH & MALKUT POLYHEXES.....	17
FIGURE 14: THE KETER-MALKUT HEPTAHEX	18
FIGURE 15: THE KETER-MALKUT HEXAGRAM	18
FIGURE 16: YHV & YHVH - EXAMPLE POLYHEXES.....	19
FIGURE 17: TWO SIMPLE PENTAHEXES TILING THE PLANE	20
FIGURE 18: THE SHIN PENTAHEX TILING THE PLANE	21
FIGURE 19: THE BINAH, MALKUT, & SHIN POLYHEXES.....	21
FIGURE 20: THE SHIN PENTAHEX & HEBREW LETTER	22
FIGURE 21: THE TWELVE SIMPLE PENTAHEXES	23
FIGURE 22: THE THREE MOTHER PENTAHEXES.....	23
FIGURE 23: THE SEVEN DOUBLE PENTAHEXES.....	24
FIGURE 24: THE TWELVE SIMPLE PENTAHEXES & HEBREW LETTERS	25
FIGURE 25: THE THREE SIMPLE FIRE PENTAHEXES.....	26
FIGURE 26: THE THREE SIMPLE WATER PENTAHEXES.....	26
FIGURE 27: THE THREE SIMPLE AIR PENTAHEXES.....	27
FIGURE 28: THE THREE SIMPLE EARTH PENTAHEXES.....	27
FIGURE 29: THE TWO PENTAHEX TRIANGLES	29
FIGURE 30: PENTAHEX ALPHABET YHVH.....	30
FIGURE 31: PENTAHEX ALPHABET DBR.....	30
FIGURE 32: THE ANGEL MICHAEL - PENTAHEX ALPHABET	31
FIGURE 33: THE FIRST TWELVE POLYHEXES FORM A HEXAGON	33
FIGURE 34: A PENTAHEX HEXAGONAL MANDALA	34
FIGURE 35: A 34 POLYHEX TREE OF LIFE HEXAGON.....	35
FIGURE 36: THE POLYHEX TREE OF LIFE HEXAGON - LABELLED	36
FIGURE 37: A TEN SEFIROT POLYHEX HEXAGRAM	37
FIGURE 38: A TEN SEFIROT POLYHEX HEXAGON	37
FIGURE 39: A PENTAHEX SNOWFLAKE MANDALA	38
FIGURE 40: A TREE OF LIFE POLYHEX SNOWFLAKE	39
FIGURE 41: A TREE OF LIFE POLYHEX TRIANGLE.....	40
FIGURE 42: ANOTHER TREE OF LIFE POLYHEX TRIANGLE	41
FIGURE 43: THE APEX TRIANGLE IS MIRRORED.....	42
FIGURE 44: A TRIANGULAR POLYHEX MANDALA - LABELLED.....	43
FIGURE 45: A TREE OF LIFE POLYHEX TRIPLE DIAMOND.....	44
FIGURE 46: TREE OF LIFE TRIPLE DIAMOND - LABELLED	45
FIGURE 47: THE TREE OF LIFE TRIPLE DIAMOND BLUEPRINT	46

FIGURE 48: TREE OF LIFE TRIPLE DIAMOND MANDALA – HORIZONTAL VERSION47

FIGURE 49: THE HORIZONTAL TRIPLE DIAMOND MANDALA - LABELLED.....47

FIGURE 50: CLOSER TO THE TREE OF LIFE48

FIGURE 51: A PENTAHEX HEXAGONAL MANDALA49

FIGURE 52: A PENTAHEX TRIANGULAR MANDALA.....50

FIGURE 53: A PENTAHEX HEXAGONAGRAM51

FIGURE 54: A HEXAGONAGRAM52

FIGURE 55: COMBINED HEXAGON & HEXAGONAM52

Preface

This little book does not seek to expound upon, or try to explain the esoteric meaning of the kabbalistic Tree of Life. My previous book *Formation of the Tree of Life* explored in some depth those mysteries.

This treatise does, however, provide some thought-provoking geometric correspondences that can deepen our understanding of the Tree of Life diagram through the process of visual meditation and contemplation.

I have deliberately **not** elaborated on the possible meaning of much of this visual material. Rather, I have preferred to let the images speak for themselves as much as possible.

This book has been written for students of the Kabbalah who already have some knowledge of the kabbalistic Tree of Life.

I believe that the images contained herein have the potential to stimulate the intuitive mind of the reader, and to open up pathways of understanding that perhaps exist just below the surface of consciousness.

It is my hope that these images will stir the latent knowledge within you and bring to your conscious awareness the divine illumination of the soul.

Patrick Mulcahy (16th June, 2008.)

General Introduction

As you may know, the pattern of the kabbalistic Tree of Life diagram is constructed using the geometry of the hexagon as its basis.

The ten sefirot of the Tree diagram are positioned according to the principles of hexagonal geometry.

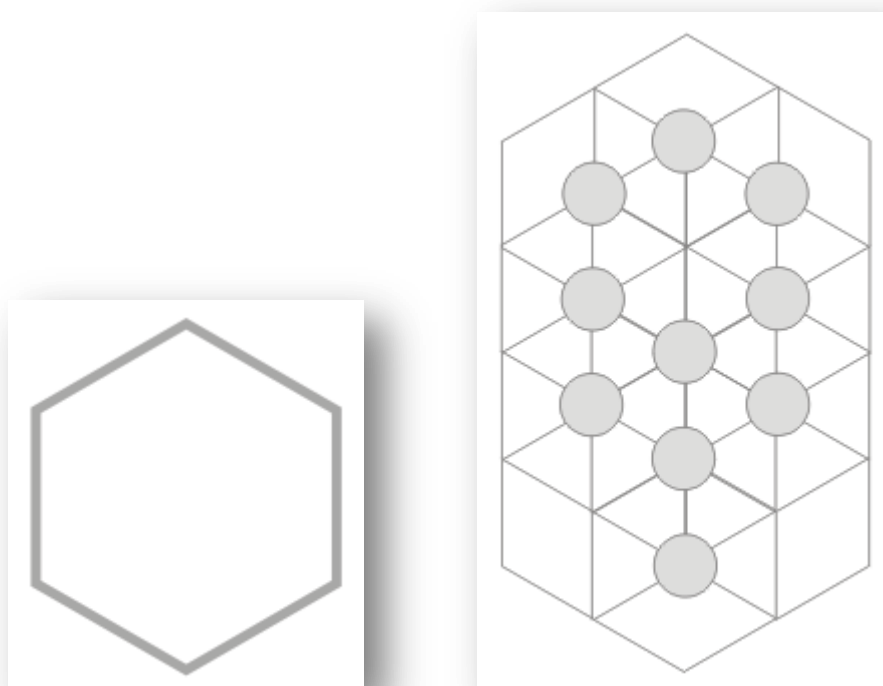


Figure 1: The Hexagonal Positioning of the Ten Sefirot

What may be new to you is the fact that the symbolism of the hexagon extends also to the ten *individual* sefirot and the twenty-two *individual* pathways of the Tree of Life.

The hexagonal geometry of the ten sefirot and the twenty-two pathways is based on what is called 'polyhex mathematics'.

A polyhex figure is one that is constructed by joining hexagons together adjacently in various configurations.

Polyhexes are classified into groups according to the number of hexagons that are used in the construction of each member of each group. Special names are used to identify each group of polyhexes.

A 'monohex' (or '1-hex') is used to describe a single hexagon. There is only one possible monohex shape.

A 'dihex' (or '2-hex') is a shape that incorporates two adjacent hexagons. There is only one possible dihex shape.

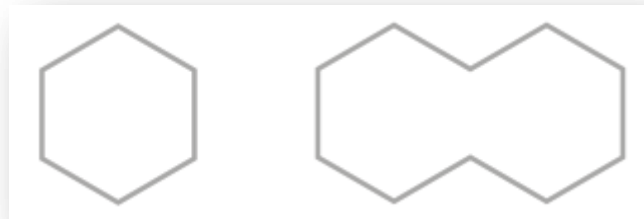


Figure 2: The Monohex & the Dihex

A 'trihex' (or '3-hex') is a shape that consists of three adjacent hexagons. There are only three possible trihex shapes.



Figure 3: The Three Trihexes

A 'tetrahex' consists of four adjacent hexagons, and a 'pentahehex' consists of five adjacent hexagons.

Below is a table showing the number of unique polyhexes in each of these groups.

Polyhex	Number in Group
1-Hex	1 Monohex
2-Hex	1 Dihex
3-Hex	3 Trihexes
4-Hex	7 Tetrahexes
5-Hex	22 Pentahehexes
Total:	34 Polyhexes

The mathematical sequence 1, 1, 3, 7, 22 is interesting because it describes the basic elements of the structure of the kabbalistic Tree of Life.

Polyhex	Number	Tree of Life
0-hex	0	Ain ('Absolute Unknown')
1-hex	1 Monohex	Ain Sof (First Veil)
2-hex	1 Dihex	Aur (Second Veil)
3-hex	3 Trihexes	3 Highest Sefirot
4-hex	7 Tetrahexes	7 Lower Sefirot
5-hex	22 Pentahehexes	22 Pathways

Thus, the hexagonal geometry that is used to construct the basic layout of the Tree of Life diagram is also seen to extend to its individual component parts (i.e. to the sefirot and pathways).

Introduction to the Polyhex Tree of Life

Here is how I basically interpret the polyhex symbolism as it is applied to the kabbalistic Tree of Life:

The first two groups of polyhexes symbolise the primordial veils: Ain Sof ('Limitlessness') and Aur ('Light').

These two polyhex groups are significantly different to those that follow because they contain only one polyhex each.

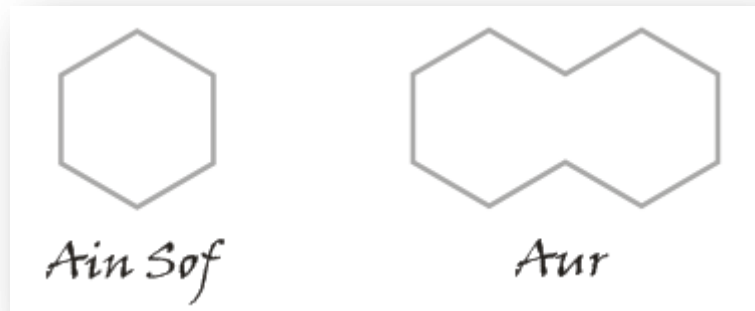


Figure 4: The Two Primordial Veils

It is not until we reach the third polyhex group (i.e. the 3-hex group) that variation becomes possible and multiple forms are generated.

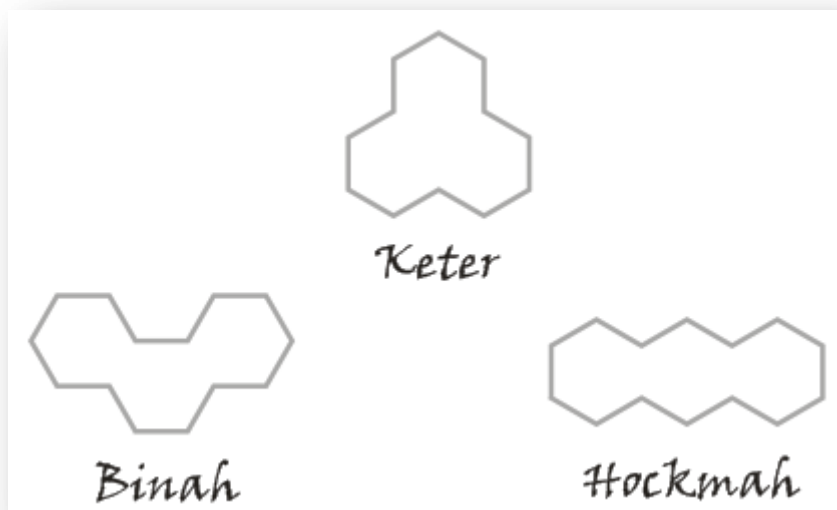


Figure 5: The Three Trihex Sefirot

The three trihexes symbolise the highest three sefirot of the Tree of Life.

Variation increases when a fourth hexagon is added to form the 4-hex group.

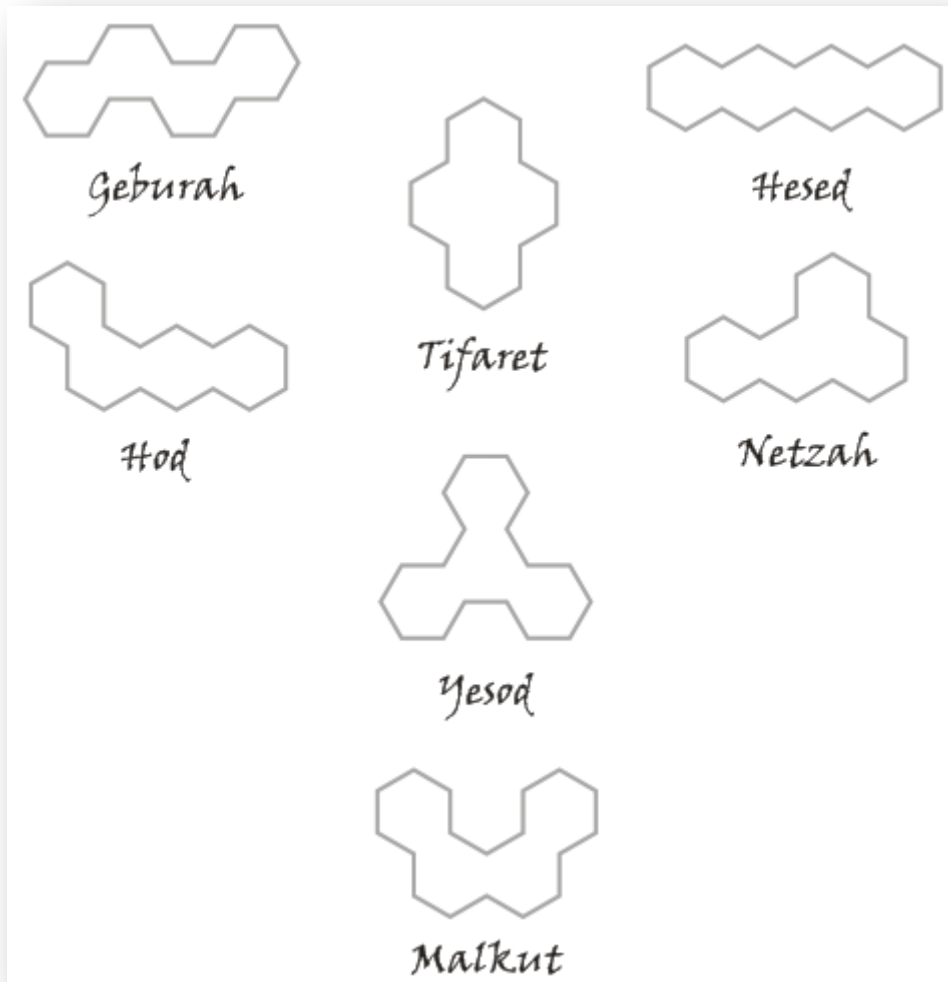


Figure 6: The Seven Tetrahex Sefirot

The seven tetrahexes of the 4-hex group symbolise the seven lower sefirot of the Tree of Life.

When a fifth hexagon is added a total of twenty-two 5-hex forms are generated.

The twenty-two pentahexes correspond with the twenty-two pathways of the Tree of Life (and also the 22 letters of the Hebrew alphabet).

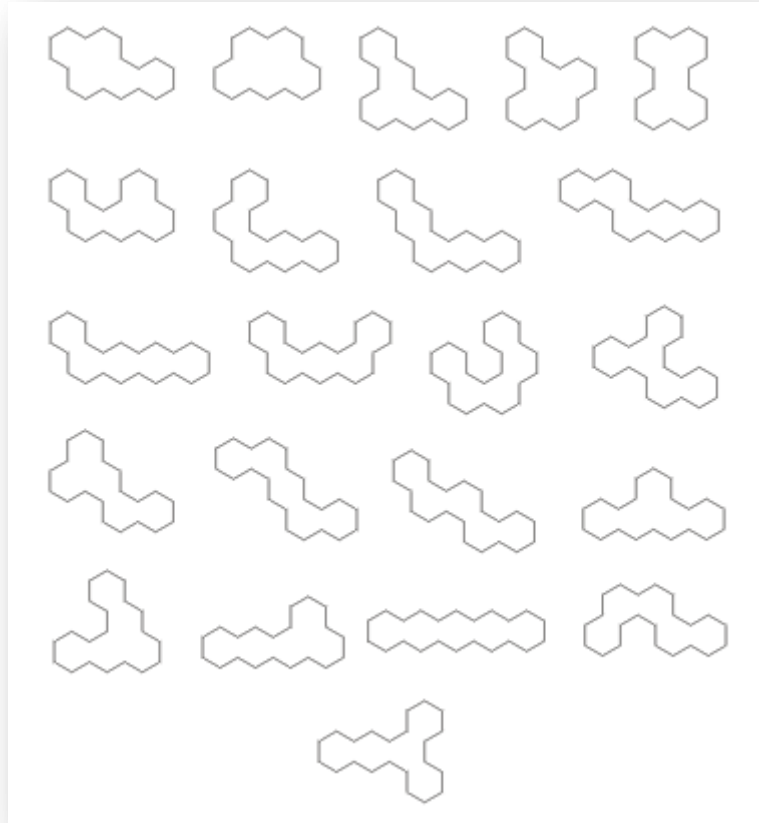


Figure 7: The Twenty-two Pentahexes

Thus, the various components of the structure of the Tree of Life diagram can be seen to correspond with the sequence of polyhex groups from 1-hex to 5-hex.

The first four orders of polyhexes reflect the main body of the Tree diagram (i.e. the two primordial veils and the ten sefirot) while the fifth order of polyhexes is associated with the twenty-two pathways of the Tree of Life.

These first five classes of polyhexes are geometrically differentiated from the higher order groups that follow them because none of the first five groupings contain a polyhex with a hole in it.

It is not until the sixth order of polyhexes is reached that a hole appears, and then in only one of the total 82 hexahexes in the 6-hex group.

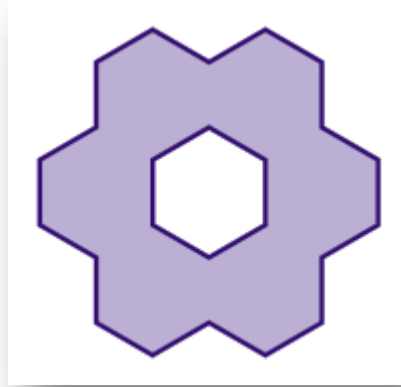


Figure 8: The Single Hexahex Containing a Hole

The Polyhex Tree of Life

The Three Highest Sefirot

The principles of hexagonal geometry upon which these polyhex forms are based allow the figures in each polyhex group to be fitted together adjacently in the manner of a jigsaw puzzle. But unlike a jigsaw puzzle, polyhexes can form multiple and various shapes depending on how they are arranged.

As I mentioned previously, the single monohex symbolises the first primordial veil—called ‘Ain Sof’, and the single dihex represents the second primordial veil—called ‘Aur’.

Significantly, these two polyhexes fit snugly together to form (what I consider to be) the first trihex—corresponding to the first sefirah of the Tree of Life, called Keter.

So the monohex of Ain Sof combines with the dihex of Aur to produce the first trihex representing Ain Sof Aur (‘Limitless Light’) and the first sefirah Keter of the Tree of Life.

The two remaining trihexes then naturally align with the sefirot Hockmah and Binah of the Tree of Life.

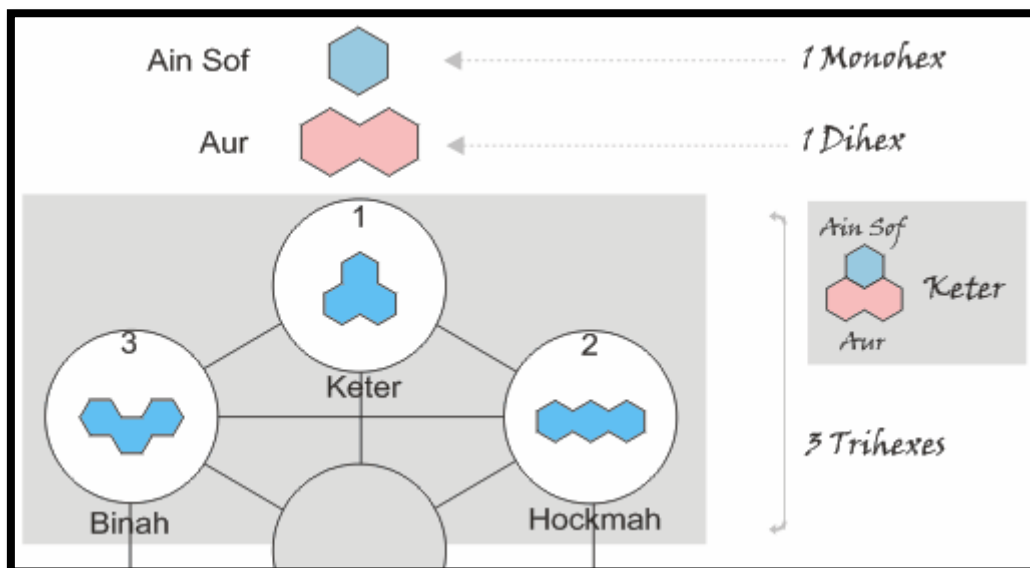


Figure 9: The First Three Sefirot of the Tree of Life

The symbolism of Ain Sof ('Limitlessness') and Aur ('Light') combining to form the first sefirah Keter reflects the idea of Keter being so close to the Limitless Light (Ain Sof Aur) that their point of separation is barely definable.

I have assigned the 'straight line' trihex to Hockmah and the curving trihex to Binah.

Thus, the Keter trihex resembles and symbolises a 'point', the Hockmah trihex symbolises a 'line', and the Binah trihex symbolises a 'curve'.

This basic symbolism is also reflected downward in the tetrahex sefirot directly beneath Keter, Hockmah and Binah—i.e. in Tifaret, Hesed and Geburah. (See below.)

You will notice that the curving shape of the Binah trihex is also reflected down to the Malkut tetrahex.

The Seven Lower Sefirot

In arranging the seven tetrahexes upon the Tree of Life diagram I have used a rationale that links the higher three sefirot with the lower seven sefirot.

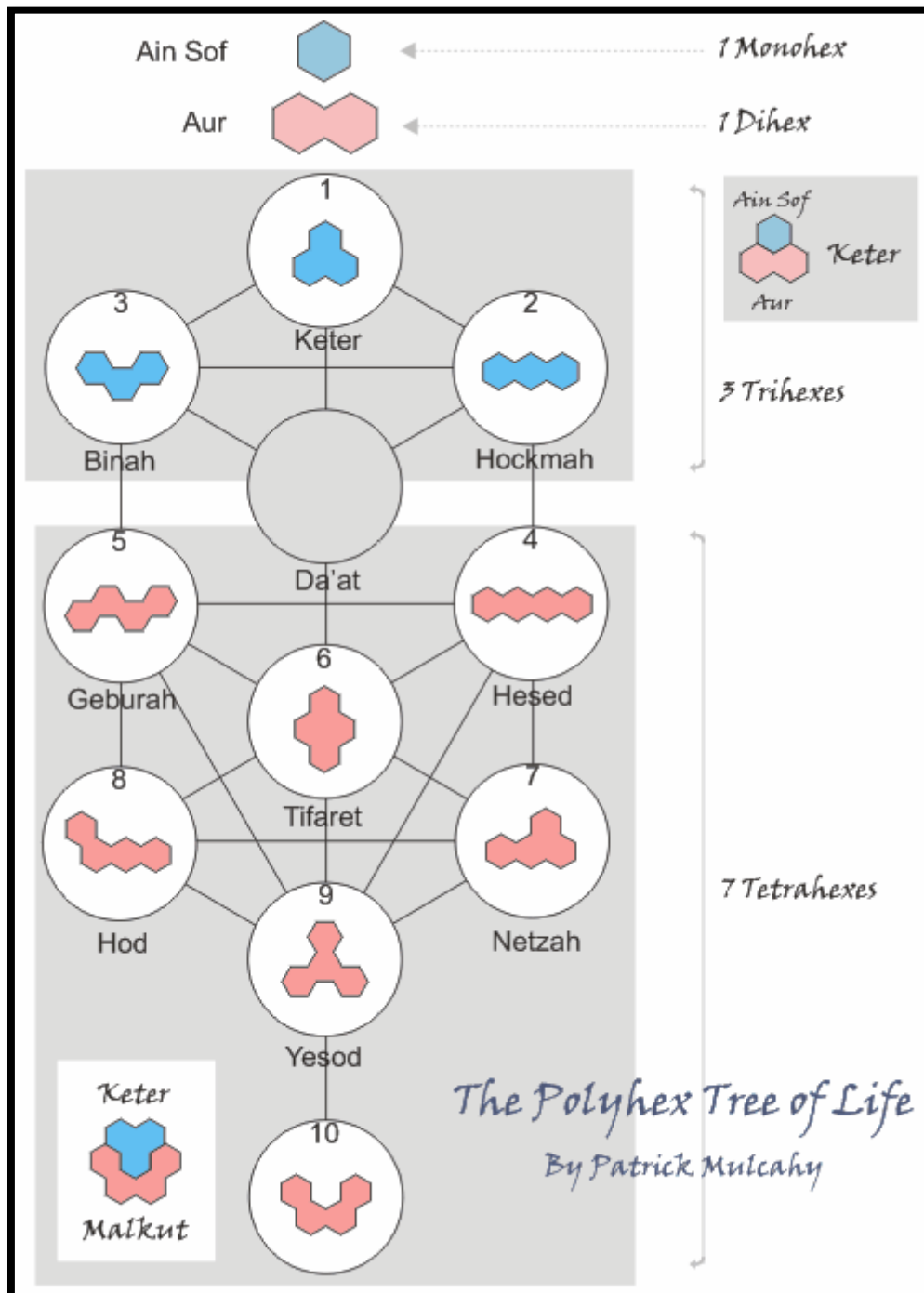


Figure 10: The Polyhex Tree of Life

The Tifaret tetrahex is thus a natural extension of the Keter trihex.

Similarly, the Hesed tetrahex is a natural extension of the Hockmah trihex, and the Geburah tetrahex builds naturally upon the Binah trihex.

In Geburah the Binah curve becomes an undulation—like the twisting movement of a serpent.

The Malkut Tetrahex

The Malkut tetrahex has been assigned because it has a unique geometric property that separates it from the other six tetrahexes in the 4-hex group. (Note that its shape also bears a significant resemblance to the Binah trihex.)

The first six tetrahexes are able to ‘tile the plane’ by translation in two directions. In other words, they can completely cover an area by being stacked on top of each other.

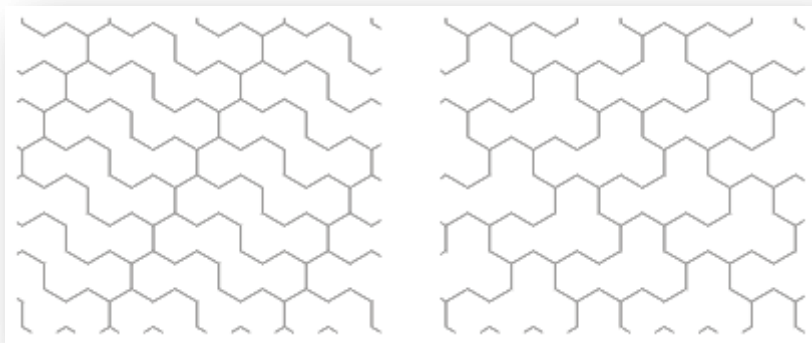


Figure 11: Two Examples of Tetrahexes Tiling the Plane

The seventh (or Malkut) tetrahex, on the other hand, is unable to tile the plane in that manner. It is only able to tile the plane by rotating 180° in the plane.

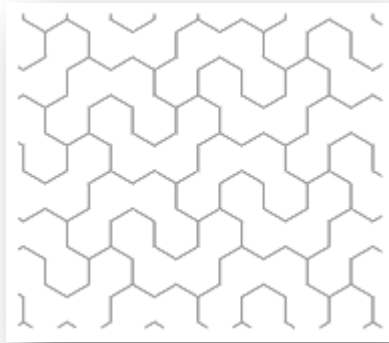


Figure 12: The Malkut Tetrahex Tiling the Plane

You will notice a similarity between the shape of the Binah trihex and the Malkut tetrahex.

The Binah-Malkut polyhex geometric similarity reflects the special relationship that is thought to exist between these two sefirot.



Figure 13: The Binah & Malkut Polyhexes

Interestingly, this assignment of the Malkut tetrahex also means that it is able to combine symmetrically with the Keter trihex to form (what I consider to be) the first heptahex of the 7-hex order of polyhexes.



Figure 14: The Keter-Malkut Heptahex

The Keter-Malkut heptahex is similar in structure to a hexagram (or Jewish 'Star of David').

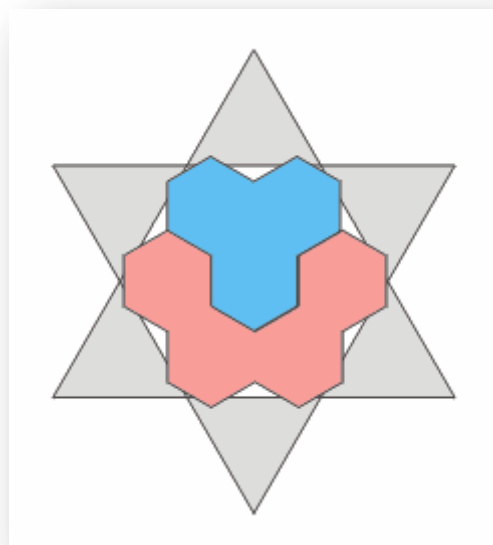


Figure 15: The Keter-Malkut Hexagram

The symbolism of this Keter-Malkut polyhex relationship is (I feel) quite apposite with the esoteric meaning of the Tree of Life diagram.

The Holy Name

The seven tetrahexes, by definition, consist of clusters of four hexagons. It is tempting therefore, to associate their component hexagons with the four letters of the holy Tetragrammaton YHVH.

Similarly, the three hexagons of the three trihexes can be associated with the three letters of the holy Trigrammaton YHV.

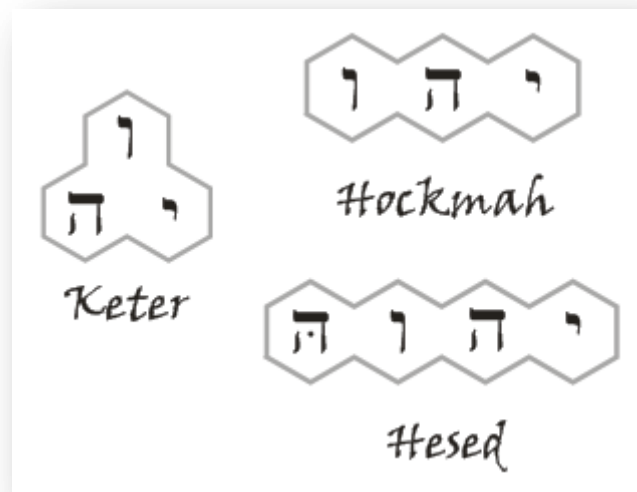


Figure 16: YHV & YHVH - Example Polyhexes

The Twenty-two Pathways

It is not as easy to assign the twenty-two pentahexes individually to their Tree of Life pathways as it is to assign the other polyhexes to their associated sefirot.

One major clue that helps us however, is that twelve of the twenty-two pentahexes are geometrically differentiated from the others and therefore appear to correspond with the twelve Simple letters of the Hebrew alphabet (i.e. as set forth in the book: *The Sefer Yetzirah*).

Like the six Hesed to Yesod tetrahexes, these twelve pentahexes are able to 'tile the plane' (without rotation) by being stacked on top of each other.

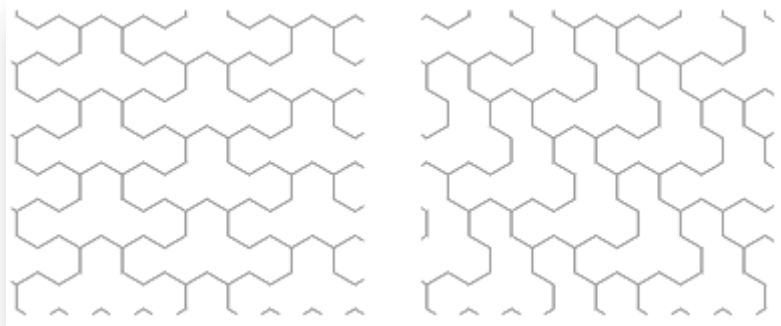


Figure 17: Two Simple Pentahexes Tiling the Plane

I am unsure (at this stage) whether the remaining ten tetrahexes can be somehow geometrically subdivided into a group of three and a group of seven—i.e. corresponding with the subdivision of the Hebrew alphabet into three Mother letters and seven Double letters.

It is known however, that they can be differentiated geometrically into two groups of one and nine.

The Shin Pentahex

Of these ten, a single pentahex is distinguished from all the other twenty-one pentahexes because it can only tile the plane 'isohedrally'.

This means that the layered symmetry of the tiling process is periodically interrupted by a necessary rotation of the pentahex shape.

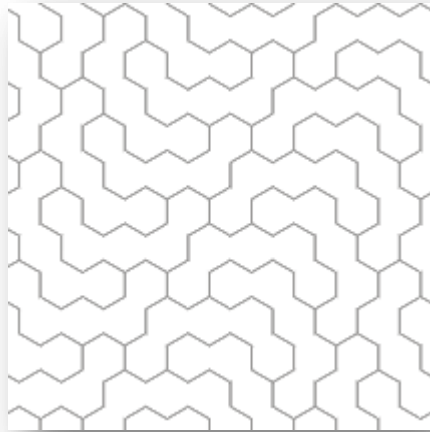


Figure 18: The Shin Pentahex Tiling the Plane

I have chosen to assign this special pentahex to the path of Shin.

The Hebrew letter Shin is one of the three Mother letters of the Hebrew alphabet.

I have assigned the Shin pentahex primarily because it bears a geometric similarity to the Binah trihex and the Malkut tetrahex.



Figure 19: The Binah, Malkut, & Shin Polyhexes

The kabbalistic system of the *Sefer Yetzirah* associates the Hebrew letter Shin with the sefirah Binah (and therefore also indirectly with the sefirah Malkut).

In my understanding the Hebrew Mother letter Shin also has a special esoteric association with the twelve Hebrew Simple letters. (Similarly, the Mother letter Maym is associated with the seven Hebrew Double letters, and the Mother letter Alef with the three Hebrew Mother letters themselves.)

Interestingly, you will notice that the Shin pentahex bears a certain resemblance to the actual shape of the Hebrew letter Shin.



Figure 20: The Shin Pentahex & Hebrew Letter

Towards A Pentahex Alphabet

The twenty-two pentahexes can be associated with the twenty-two letters of the Hebrew alphabet.

Twelve pentahexes are geometrically different to the other ten and therefore can reasonably be assigned to the twelve Simple Hebrew letters.

These twelve are in fact *actually* geometrically 'simpler' than the other ten pentahexes in the 5-hex group, which is why they are able to tile the plane in the way that they do.

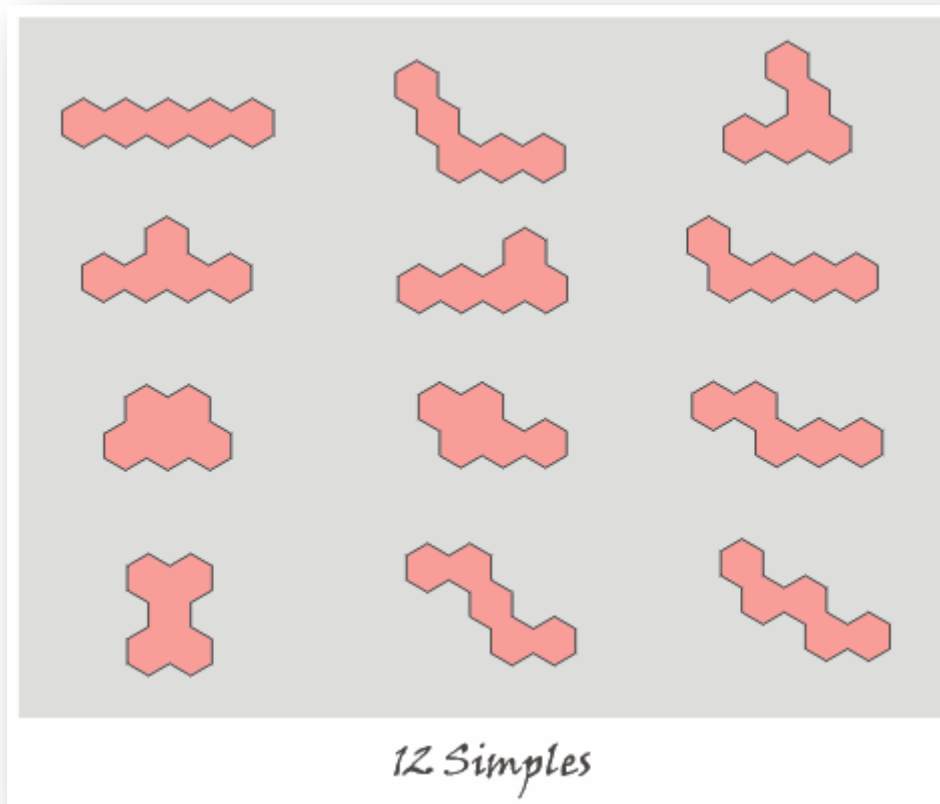


Figure 21: The Twelve Simple Pentahexes

Interestingly, due to the unique irregularities of the shapes of the remaining ten pentahexes they can all be assigned to the three Mother and seven Double letters of the Hebrew alphabet by similarity of shape.



Figure 22: The Three Mother Pentahexes

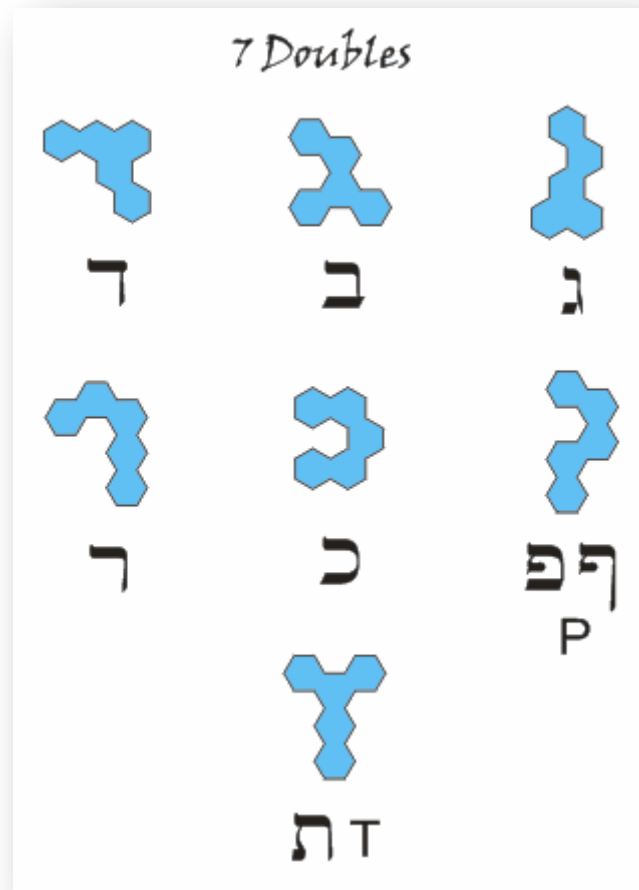


Figure 23: The Seven Double Pentahexes

If you are very familiar with the Hebrew alphabet then you may notice some quite remarkable similarities between these ten pentahexes and the three Mother and seven Double Hebrew letters.

The pentahex associated with the Hebrew letter Peh is probably the least like its Hebrew letter counterpart, but it's not too dissimilar to the 'final form' of the letter Peh, or the modern English letter P.

The Tav pentahex is also quite dissimilar to the modern shape of the Hebrew letter Tav, but it resembles quite closely the primitive form of the ancient Hebrew Tav. This ancient Tav shape is identical to its modern English language equivalent—the letter T.

The Twelve Simple Pentahexes

As I mentioned above, unfortunately it is difficult to assign the twelve simple pentahexes to their Hebrew letter equivalents by shape in any obvious way.

Therefore, the approach I have taken is to identify processes of change—four in particular—that symbolically move through the shapes of the twelve pentahexes.

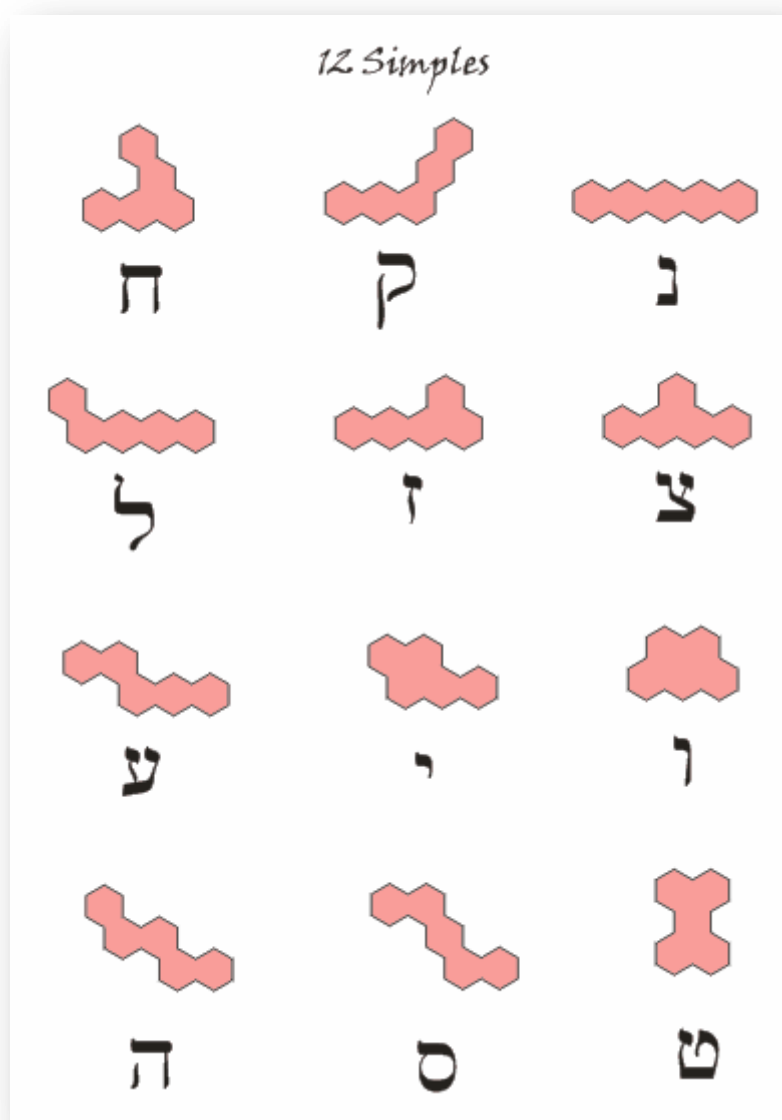


Figure 24: The Twelve Simple Pentahexes & Hebrew Letters

Following the lead of the *Sefer Yetzirah* I have organised the twelve Simple pentahexes into four astrologically based groupings.

I have assigned the three Fire sign pentahexes according to a process that moves through them—a process that resembles the raising of a tower.

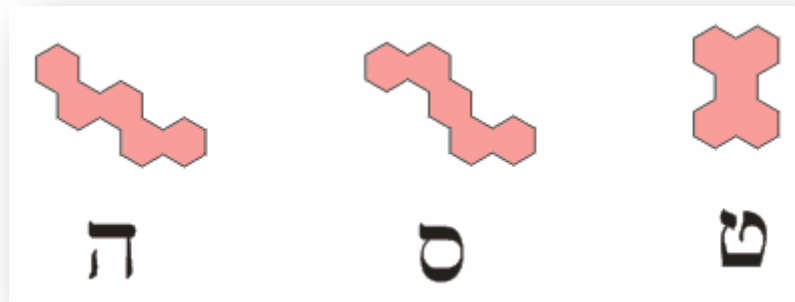


Figure 25: The Three Simple Fire Pentahexes

The Heh (Cardinal Fire) pentahex symbolises the initial lifting and pushing vertically forward and upward of the tower structure. The Sameck (Mutable Fire) pentahex represents the second stage of the tower erection process. The Tet (Fixed Fire) pentahex represents the completed erection and stabilization of the tower.

The three Water sign pentahexes describe a process that resembles a wave breaking on the surface of the ocean.



Figure 26: The Three Simple Water Pentahexes

The Het (Cardinal Water) pentahex represents the initial surging and mounting of the wave-form. The Qof (Mutable Water) pentahex then shows the wave-form breaking. And finally, the Nun (Fixed Water) pentahex symbolises the flattening and stabilising of the ocean (i.e. after the wave has broken).

The three Air pentahexes simulate the movement of a pendulum.

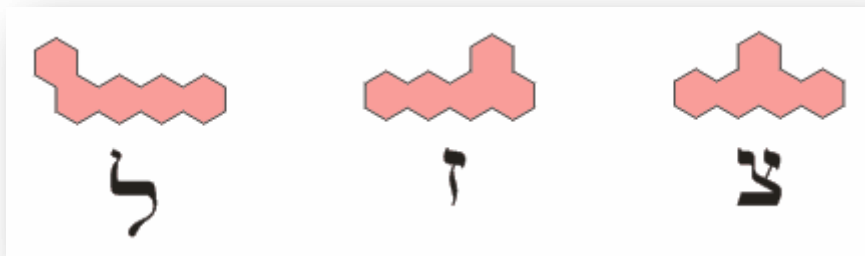


Figure 27: The Three Simple Air Pentahexes

The Lamed (Cardinal Air) pentahex symbolises the initial pulling back of the weight of the pendulum. The Zayn (Mutable Air) pentahex represents the swing of the pendulum to its opposite extremity. The Tzaddie (Fixed Air) pentahex shows the weight of the pendulum returned to a balanced state of equilibrium.

The three Earth pentahexes symbolise the process of a stone block being pushed horizontally into position.

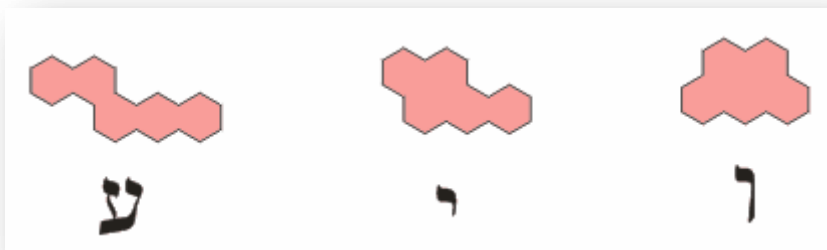


Figure 28: The Three Simple Earth Pentahexes

The Ayin (Cardinal Earth) pentahex represents the initial push that starts the stone block moving. The Yud (Mutable Earth) pentahex represents the actual movement and momentum of the block as it slides forward towards its final position. The Vav (Fixed Earth) pentahex symbolises the stone block stabilised and at rest after it has been pushed into place.

Of course, I am unsure whether this method I have used to assign the twelve pentahexes to the twelve Simple Hebrew letters is appropriate or correct, but I think it serves as a good starting point for experimentation.

Please feel free to assign them differently if you discover a system of allocation that is more to your liking.

The Simple letter zodiacal correspondences are as follows:

Heb. Letter	Quality	Astro. Sign
Heh	Cardinal Fire	Aries
Sameck	Mutable Fire	Sagittarius
Tet	Fixed Fire	Leo
Het	Cardinal Water	Cancer
Qof	Mutable Water	Pisces
Nun	Fixed Water	Scorpio
Lamed	Cardinal Air	Libra
Zayn	Mutable Air	Gemini
Tzaddie	Fixed Air	Aquarius
Ayin	Cardinal Earth	Capricorn
Yud	Mutable Earth	Virgo
Vav	Fixed Earth	Taurus

Pentahex Word Forms

The hexagonal geometry of the twenty-two pentahexes means that they can be joined together in various configurations and patterns.

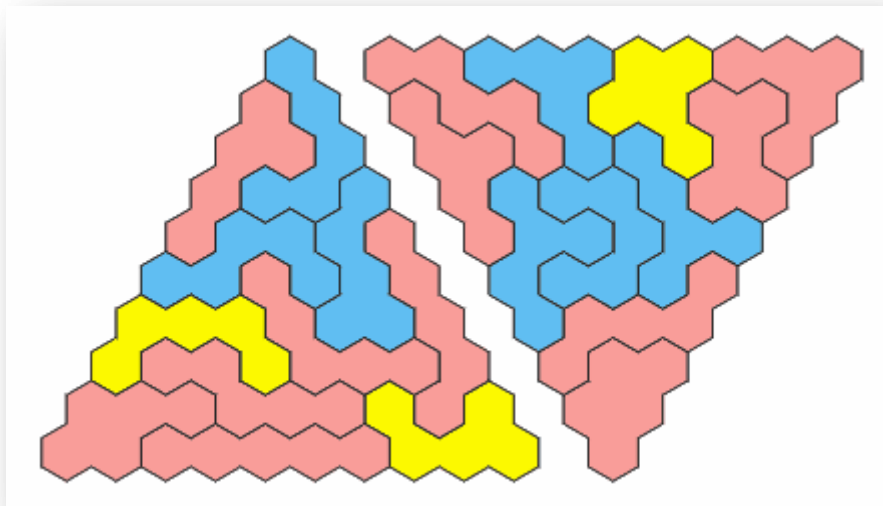


Figure 29: The Two Pentahex Triangles

For example, the twenty-two pentahexes when combined in a certain way are able to form two equilateral triangles of eleven pentahexes each, and there are various other interesting geometric shapes that can also be built using the twenty-two pentahexes.

In the figure above, the three Mother pentahexes are coloured yellow, the seven Double pentahexes are coloured blue, and the twelve Simple pentahexes are coloured red.

All this leads us to an interesting application of the twenty-two pentahexes.

If we view the pentahexes as individual letters of a geometrically based alphabet then words constructed using this alphabet will assume unique shapes according to the way that their component letters are fitted together.

For example, the four letters of the Holy Name YHVH can be arranged like this:

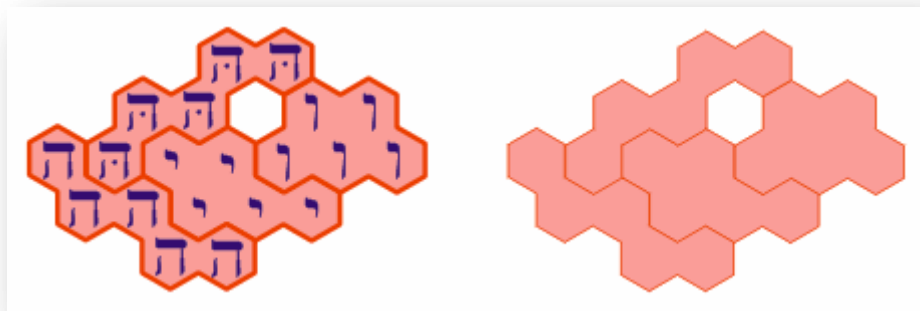


Figure 30: Pentahex Alphabet YHVH

And there are other arrangements of the four YHVH pentahexes that are also possible and that produce different shapes.

The following figure illustrates another example of a word constructed using the pentahex alphabet.

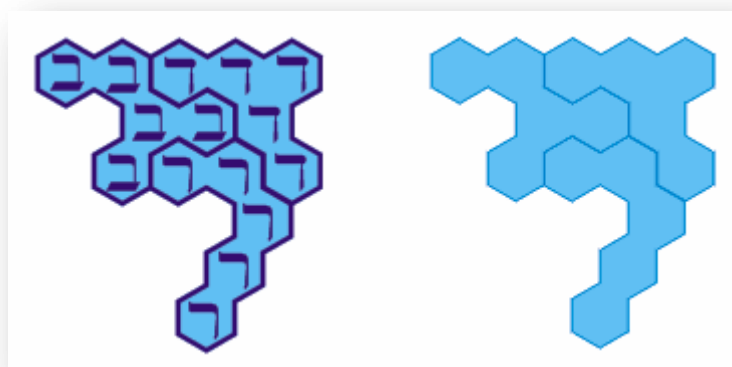


Figure 31: Pentahex Alphabet DBR

The example pentahex word-form shown in the figure above is the Hebrew word DBR, meaning 'word'.

Pentahex word-forms can be employed magickally wherever sigils are normally used.

For example, angelic names can be formed from the pentahex letters and the resulting sigils used in magickal operations.

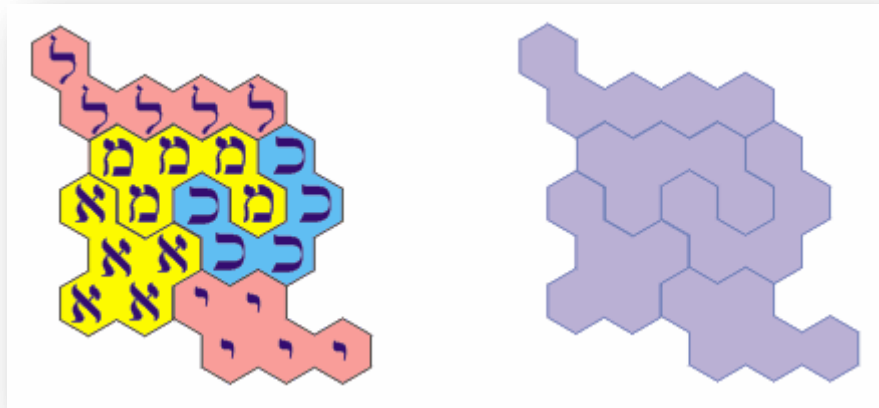


Figure 32: The Angel Michael - Pentahex Alphabet

Constructing Polyhex Tree of Life Mandalas

Introduction

As you know, there are thirty-four polyhexes included in the first five orders of polyhexes, from 1-hex to 5-hex.

These thirty-four polyhexes symbolise the two primordial veils, the ten sefirot, and the twenty-two pathways of the Tree of Life.

The kabbalistic Tree of Life however, is traditionally ascribed only thirty-two component parts—i.e. the thirty-two ‘paths of wisdom’ of the *Sefer Yetzirah*.

The two primordial veils, Ain Sof (1-hex) and Aur (2-hex), are generally omitted from the Tree of Life component tally as they are thought to be beyond manifestation, or outside of the realm of the Creation.

There are thus, two basic types of polyhex Tree of Life mandalas that can be assembled—a 34 polyhex type mandala, and a 32 polyhex type mandala.

A 32 polyhex mandala utilizes only the 3-hex, 4-hex, and 5-hex polyhexes, whereas the 34 polyhex mandala also includes the 1-hex and 2-hex polyhexes.

But, in actuality, the 32 polyhex Tree of Life mandala also discretely contains the 1-hex and 2-hex polyhexes in the structure of the first of the 3-hex polyhexes (i.e. the trihex that is allocated to the first sefirah Keter).

The sefirah Keter, as you know, represents the first subtle manifestation of the Ain Sof Aur and as such, exhibits in its own polyhex form the union of the 1-hex (Ain Sof) and 2-hex (Aur) polyhexes.

A Tree of Life Hexagonal Mandala (34 Polyhexes)

The thirty-four polyhexes (i.e. 1-hex to 5-hex) can all be fitted together to form a remarkable composite hexagon figure.

To create this polyhex Tree of Life mandala we begin by arranging the first twelve polyhexes in the following hexagonal pattern:

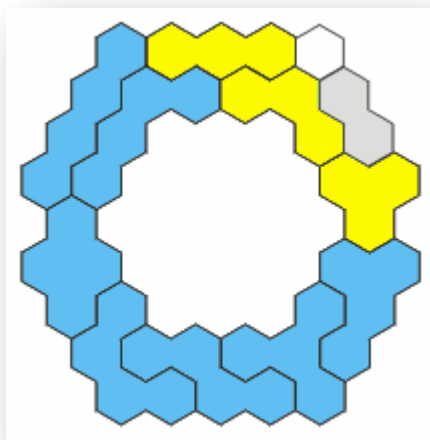


Figure 33: The First Twelve Polyhexes Form a Hexagon

These twelve polyhexes represent the main sefirotic body of the polyhex Tree of Life (plus Ain Sof and Aur).

The various components of the Tree of Life represented in the hexagon (figured above) are colour-coded as follows:

- *Ain Sof*: White
- *Aur*: Grey
- *Three Highest Sefirot*: Yellow
- *Seven Lower Sefirot*: Blue

The next step in the building process requires that we arrange the twenty-two pentahexes in a similar hexagonal pattern as follows:

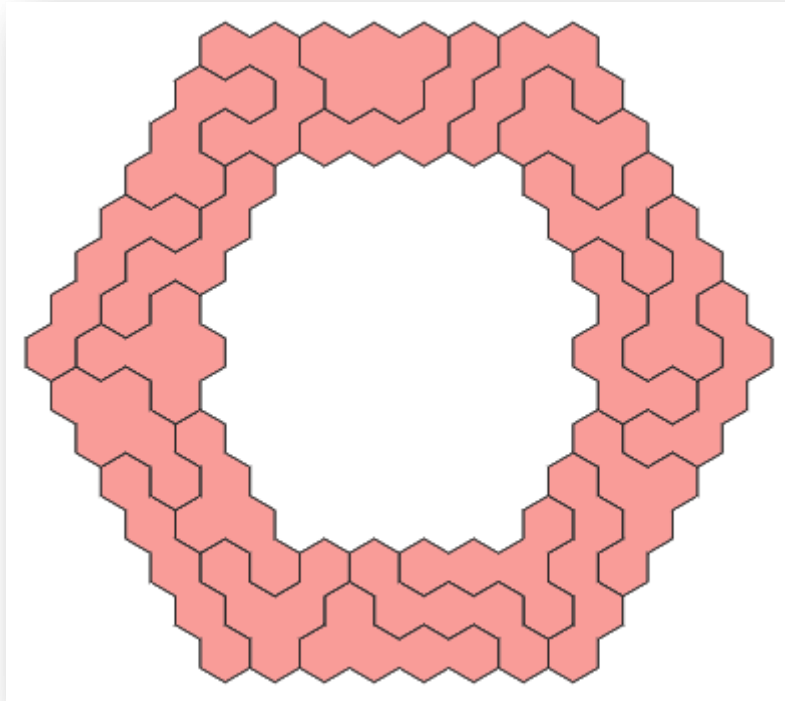


Figure 34: A Pentahex Hexagonal Mandala

As you know, these twenty-two pentahexes are associated with the twenty-two pathways of the Tree of Life.

Now, to complete this polyhex Tree of Life mandala we must place the large pentahex hexagon around the perimeter of the smaller sefirotic hexagon as follows:

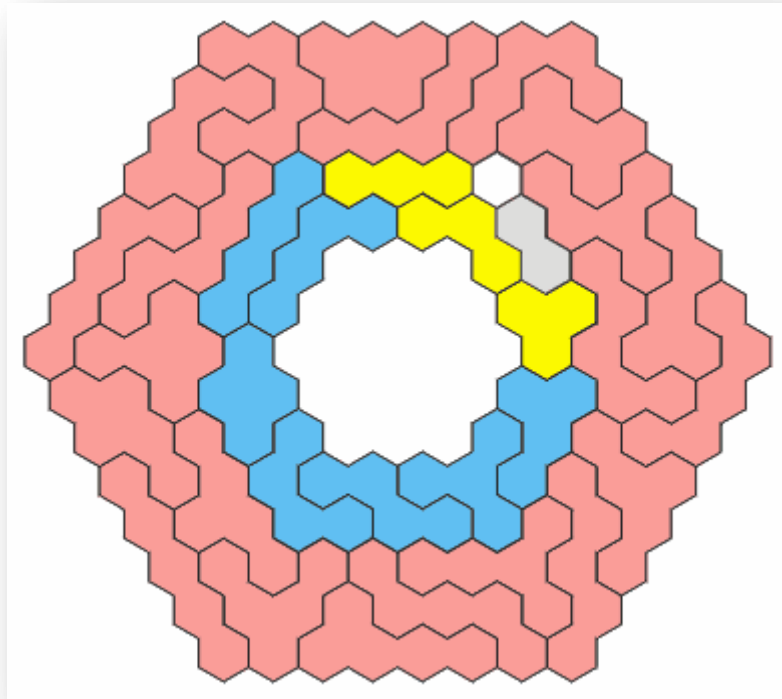


Figure 35: A 34 Polyhex Tree of Life Hexagon

Here is how the component polyhexes constituting the figure above are colour-coded:

- *Ain Sof*: White
- *Aur*: Grey
- *Three Highest Sefirot*: Yellow
- *Seven Lower Sefirot*: Blue
- *Twenty-two Pathways*: Red

In the figure above, we have effectively constructed a hexagonal mandala of the kabbalistic Tree of Life, built from the complete series of polyhexes from 1-hex to 5-hex.

I believe this symbolic arrangement deserves some contemplation.

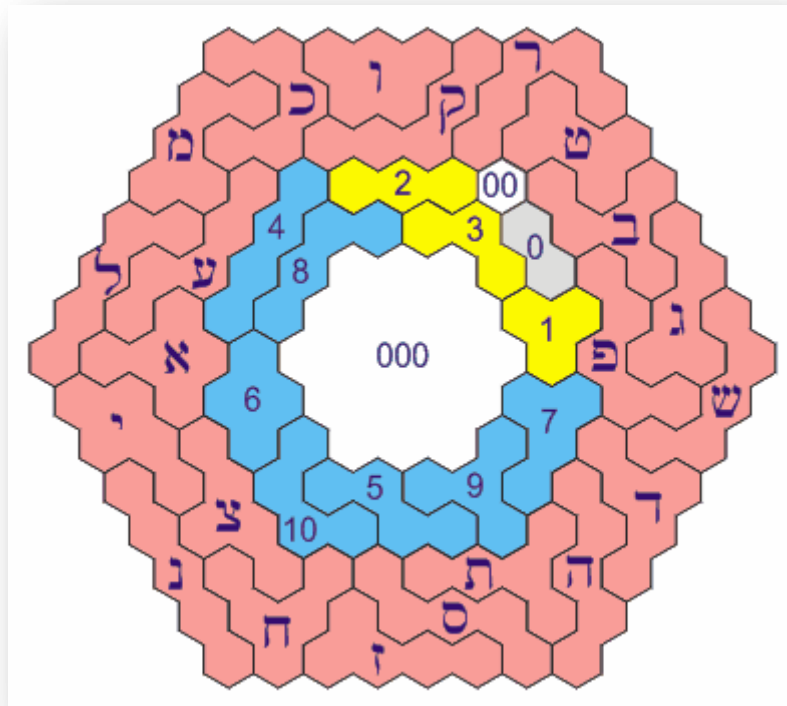


Figure 36: The Polyhex Tree of Life Hexagon - Labelled

There are a total of thirty-four component parts and 150 individual hexagons in the image above.

When we exclude the 1-hex and 2-hex polyhexes (of Ain Sof and Aur) we are left with the traditional tally of thirty-two Tree of Life components comprising a total of 147 individual hexagons.

We will create some 32 polyhex Tree of Life mandalas below.

Tree of Life Sefirotic Mandalas (10 Polyhexes)

The ten combined sefirotic polyhexes of the 3-hex and 4-hex groups can be arranged to form several interesting shapes. Among them...

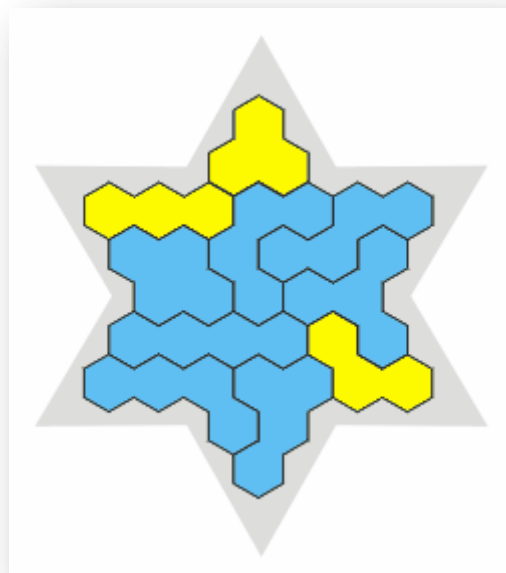


Figure 37: A Ten Sefirot Polyhex Hexagram

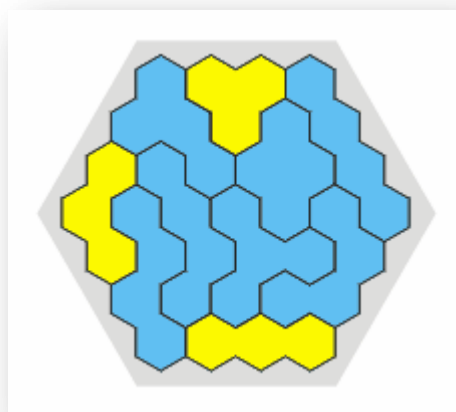


Figure 38: A Ten Sefirot Polyhex Hexagon

In both figures above, the three trihex sefirot (i.e. of Keter, Hockmah, and Binah) are coloured yellow, and the seven tetrahex sefirot (i.e. the lower sefirot) are coloured blue.

A Tree of Life 'Snowflake' Mandala (32 Polyhexes)

To produce a traditional (i.e. 32 component) version of the polyhex Tree of Life we can combine the small ten polyhex sefirotic hexagon (figured above) with the following pentahex 'snowflake' design.

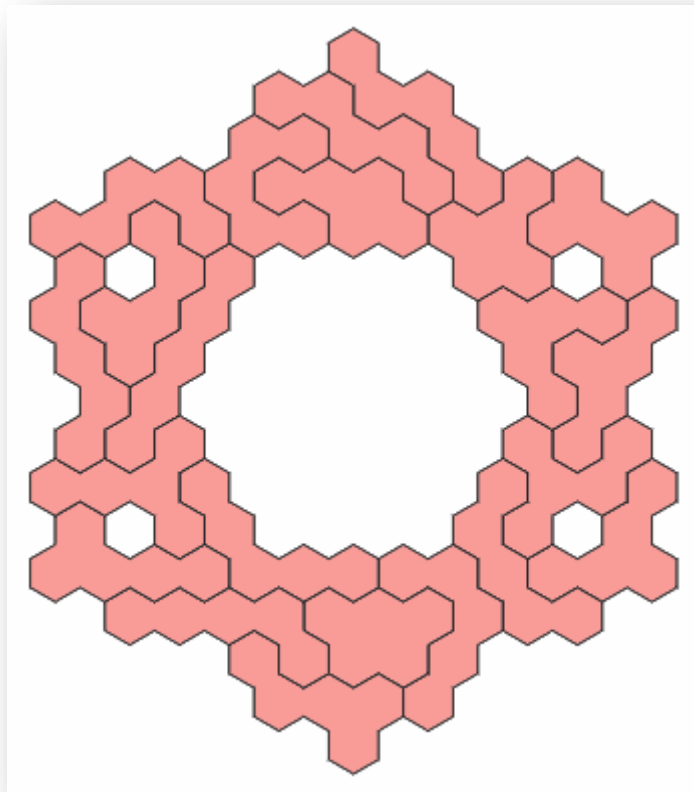


Figure 39: A Pentahex Snowflake Mandala

I designed the figure above to incorporate all the twenty-two pentahexes (i.e. symbolising the twenty-two pathways of the Tree of Life).

When we combine the pentahex snowflake (above) with the smaller sefirotic hexagon we produce the following composite figure.

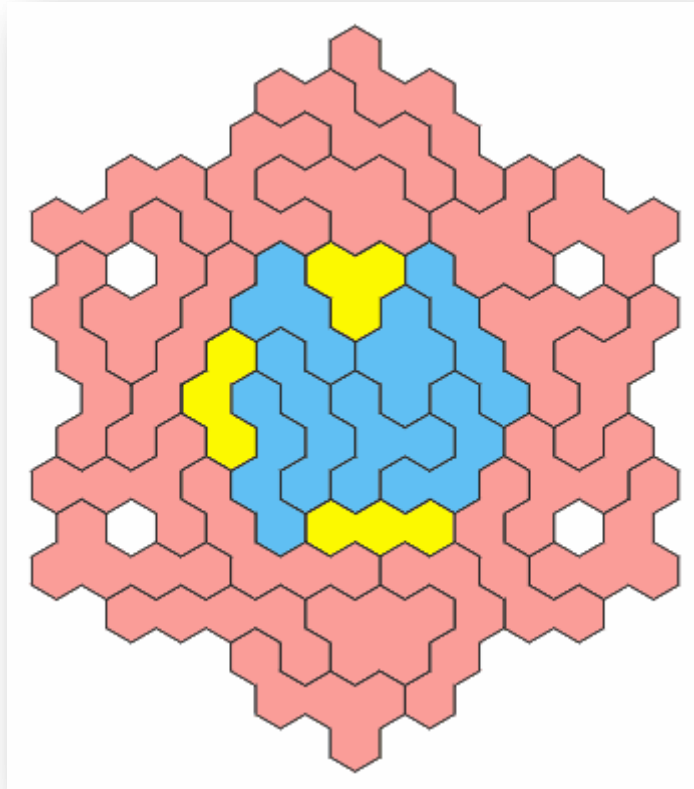


Figure 40: A Tree of Life Polyhex Snowflake

The figure above includes all the thirty-two polyhex shapes from 3-hex to 5-hex, and therefore represents the complete traditional version of the Tree of Life diagram.

The figure comprehends the ten sefirot and the twenty-two pathways, but excludes the two primordial veils of Ain Sof (1-hex) and Aur (2-hex).

But note that Ain Sof and Aur are both included in the symbolism of the Keter trihex (3-hex).

Here is how the component polyhexes constituting the figure above are colour-coded:

- *Three Highest Sefirot*: Yellow
- *Seven Lower Sefirot*: Blue
- *Twenty-two Pathways*: Red

One Hundred and Forty-seven Hexagons

The previous figure (i.e. the Tree of Life 'snowflake') is comprised of exactly 147 adjacent and adjoined hexagons, as is the following figure...

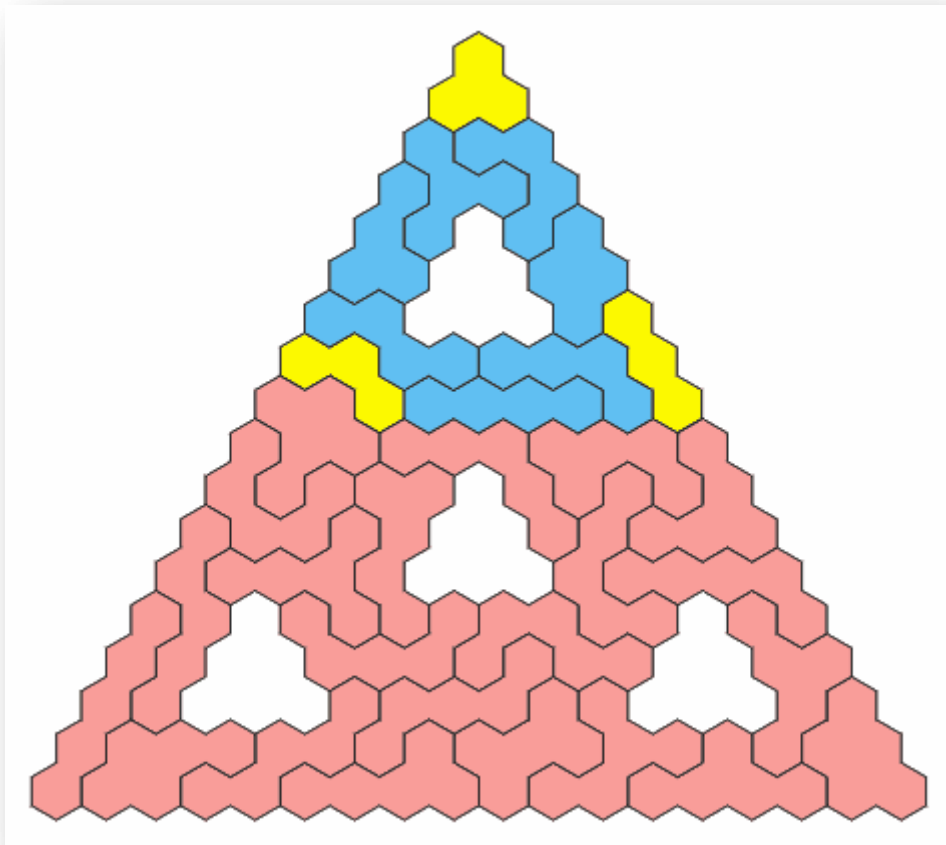


Figure 41: A Tree of Life Polyhex Triangle

At the apex of this design is the yellow Keter trihex. Below and to the right of Keter is the yellow Hockmah trihex, and opposite it (on the left-hand side) is the yellow Binah trihex.

The blue tetrahexes of the seven lower sefirot occupy the middle space between the three yellow trihexes of the highest sefirot.

One triangular hole is in the midst of the blue sefirotic polyhex triangle.

The red pentahexes (symbolising the twenty-two pathways) are spread out as the lower foundational aspect of the polyhex Tree of Life triangle.

Three triangular holes are in the midst of the twenty-two pentahexes.

As you can see, I have sought to organise the thirty-two polyhex components of the figure (above) in a way that is symbolically meaningful.

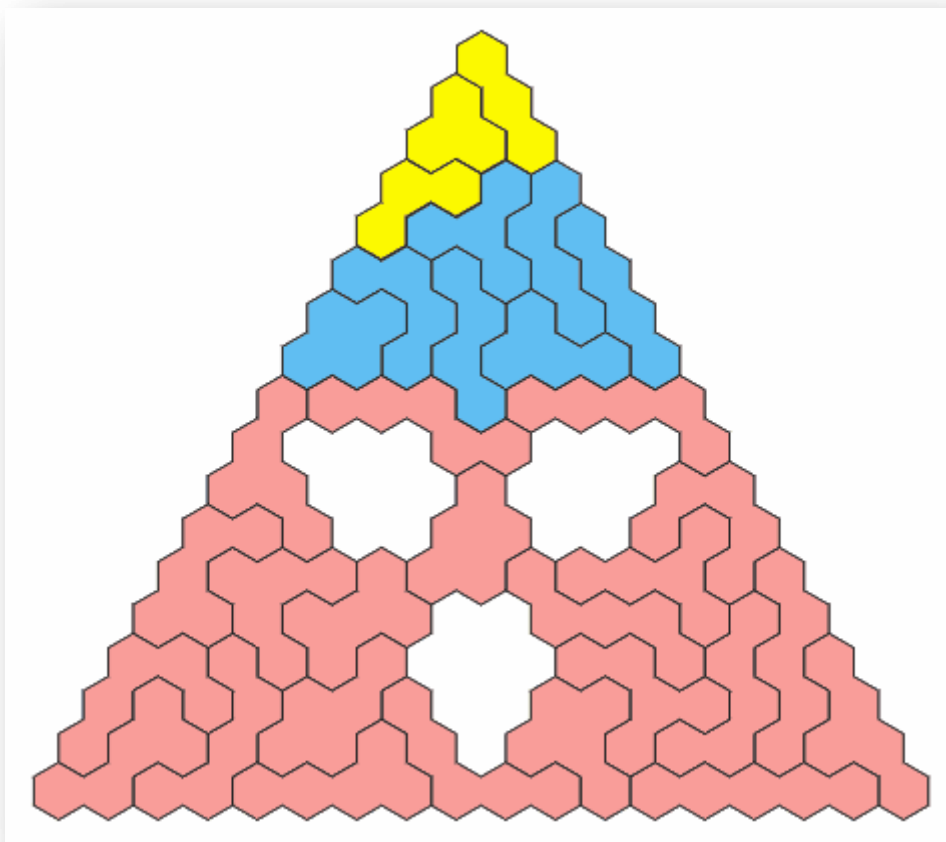


Figure 42: Another Tree of Life Polyhex Triangle

My next polyhex design (figured above) contains three roughly triangular-shaped corner sections of 49 hexagons each—that is, $3 \times 49 = 147$.

In this figure the *sefirotic* triangle (coloured yellow and blue) at the apex is mirrored by a triangular-shaped vacant area in the pentahex *pathway* section (coloured red) directly beneath it.

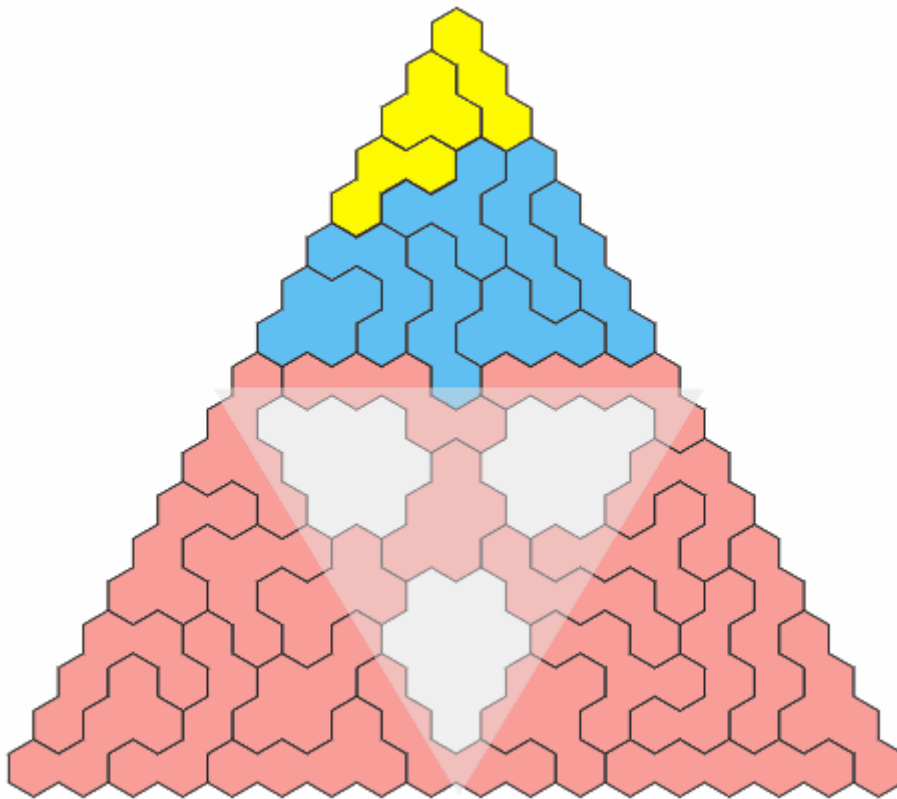


Figure 43: The Apex Triangle is Mirrored

These 32 polyhex Tree of Life mandalas all contain 147 individual hexagons because the three trihexes of the 3-hex polyhex group are constructed by joining together a total of nine hexagons, the seven tetrahexes of the 4-hex group are made from 28 hexagons, and the twenty-two pentahexes of the 5-hex group are made from 110 hexagons.

- 3-hex : $3 \times 3 = 9$ hexagons
- 4-hex : $7 \times 4 = 28$ hexagons
- 5-hex : $22 \times 5 = 110$ hexagons

Total : $9 + 28 + 110 = 147$ hexagons

Conclusion : 32 Polyhexes = 147 Hexagons

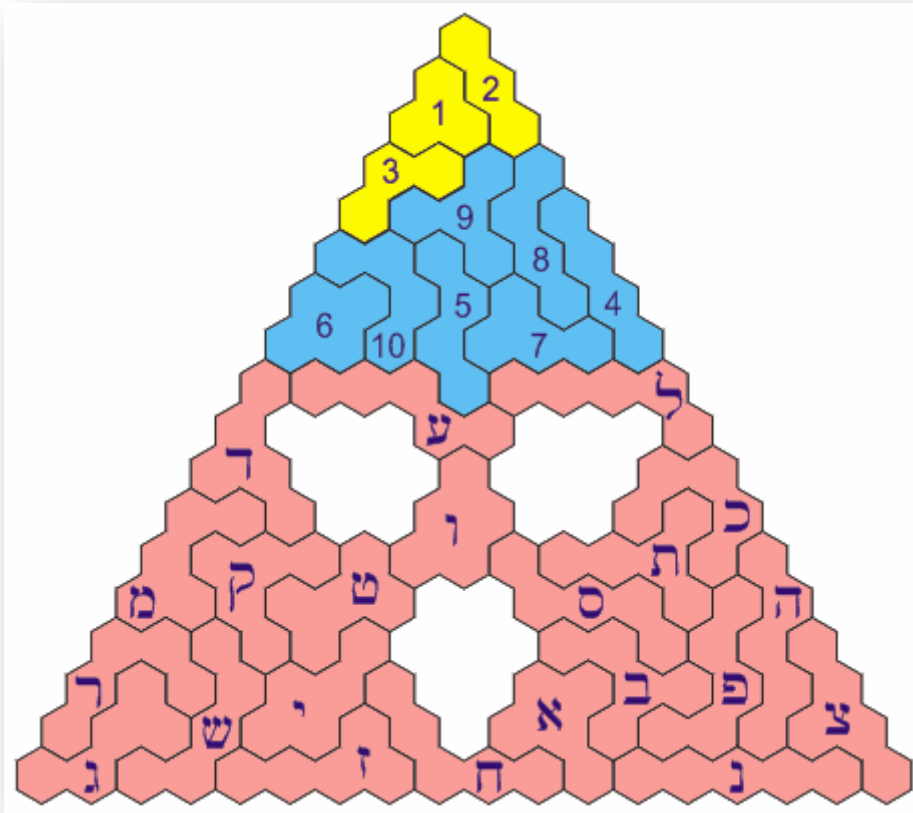


Figure 44: A Triangular Polyhex Mandala - Labelled

Here follows another of my polyhex Tree of Life designs...

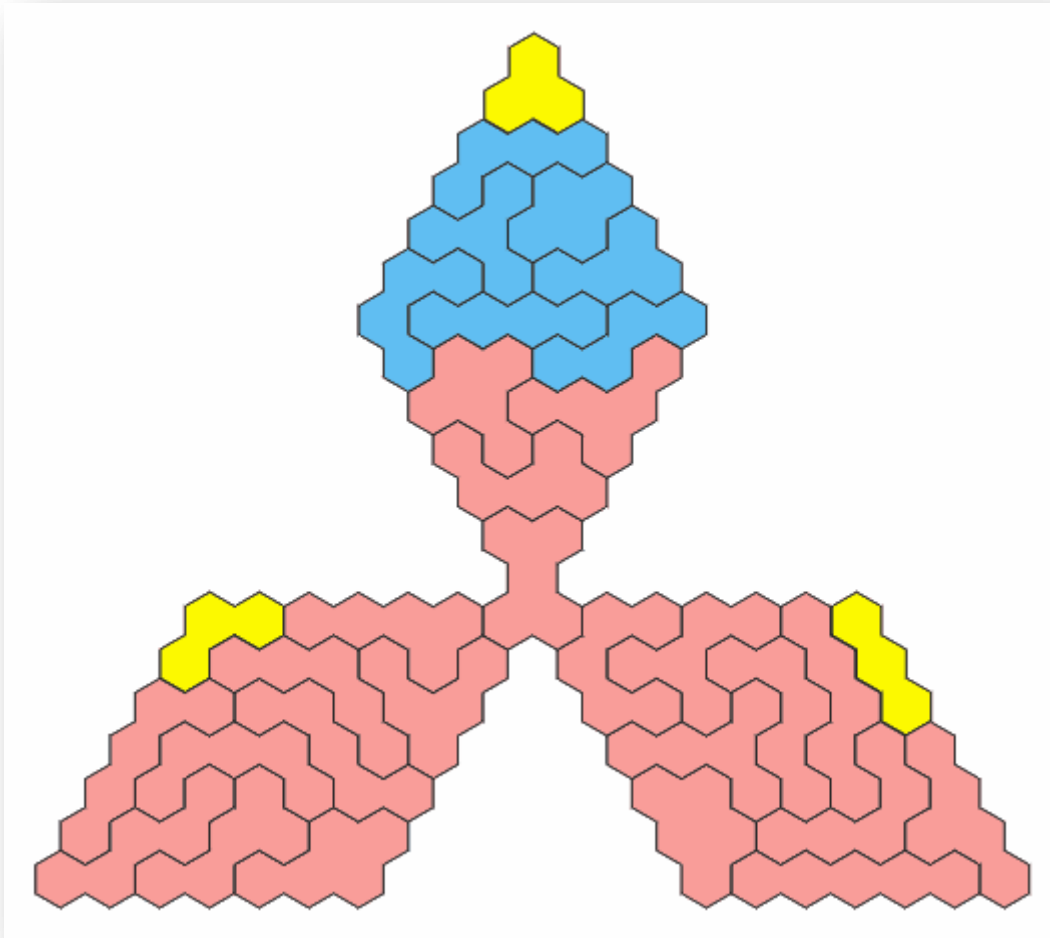


Figure 45: A Tree of Life Polyhex Triple Diamond

This pattern was a challenge to conceive and a difficult polyhex puzzle to solve.

I was looking to create a polyhex design that contained three identically shaped sections with 49 hexagons in each section. ($3 \times 49 = 147$.)

Thus, not only does the design represent the thirty-two components of the kabbalistic Tree of Life, but it also reflects the three 'jubilee' ring cycles of the 147 year master cycle of Jacob's Wheel.

The number 147 keeps cropping up in my esoteric investigations and appears to be very significant—particularly in relation to *Jacob's Wheel*.

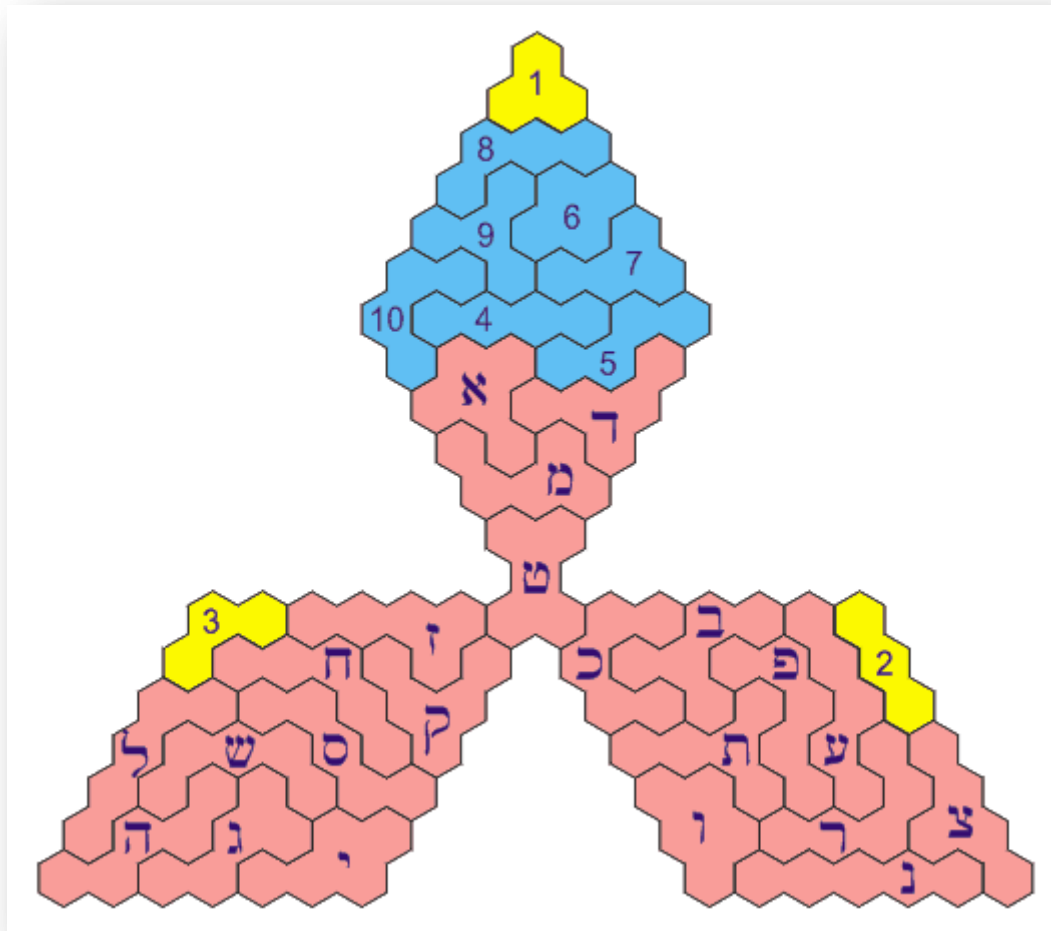


Figure 46: Tree of Life Triple Diamond - Labelled

Ideally, in the design, I would have liked to have positioned the three yellow trihexes of the supernal sefirot one in the centre of each of the three diamond shapes.

I would also have liked to position the three tetrahexes of the middle pillar—that is, the Tifaret, Yesod, and Malkut tetrahexes, in the upper diamond with the Keter trihex. The Hesed and Netzah tetrahexes would ideally be placed in the right-hand diamond along with the Hockmah trihex, and the Geburah and Hod tetrahexes in the left-hand diamond with the Binah trihex.

If you think you can find a solution, why not give it a try!

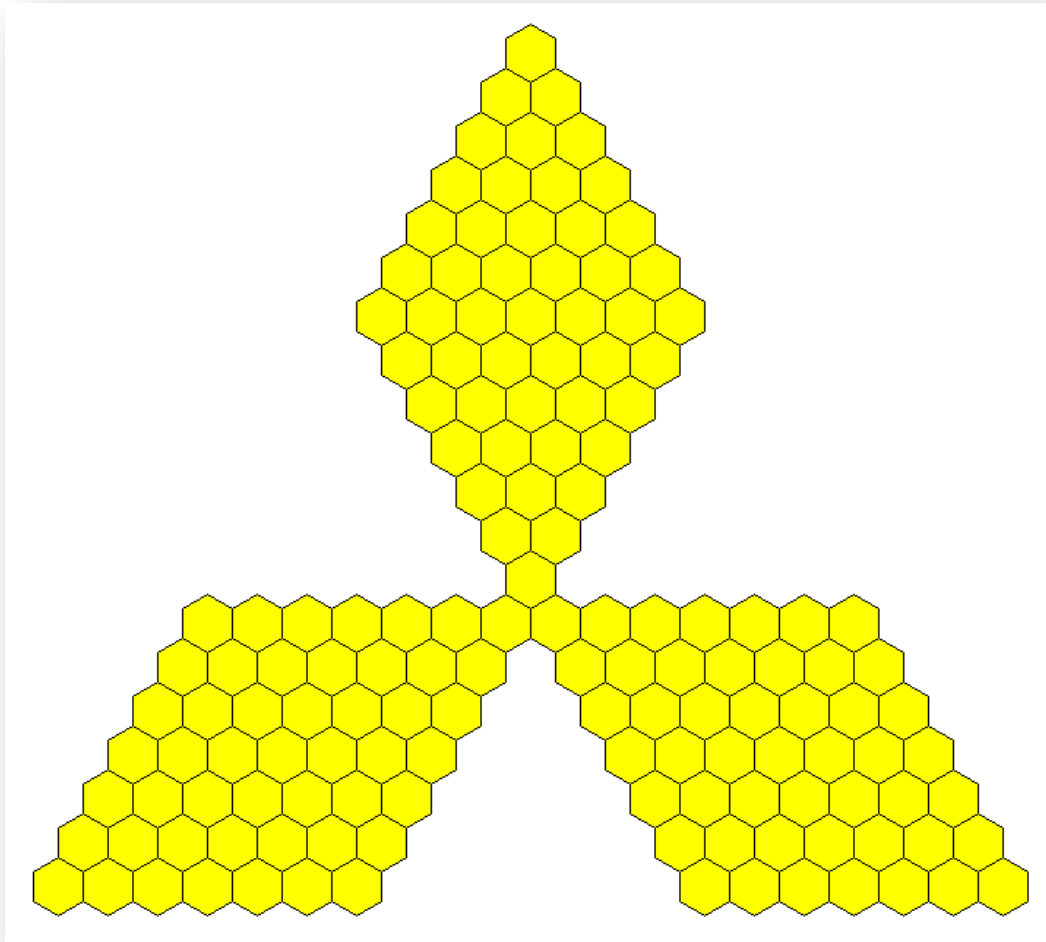


Figure 47: The Tree of Life Triple Diamond Blueprint

In the end, I resorted to rearranging the three 49 hexagon diamond sections into a new horizontal configuration (as per the figures below) and was then able to find a solution that nearly satisfied my specific polyhex placement requirements (as detailed previously).

In the design below, I have positioned the three supernal sefirot trihexes in a manner that reflects their respective Tree of Life placements.

I have also aligned the seven lower sefirot tetrahexes according to their respective locations on the three pillars of the Tree of Life—that is, left, right, or centre.

The twenty-two pathway pentahexes have been arranged randomly on the basis of wherever they will fit into the design.

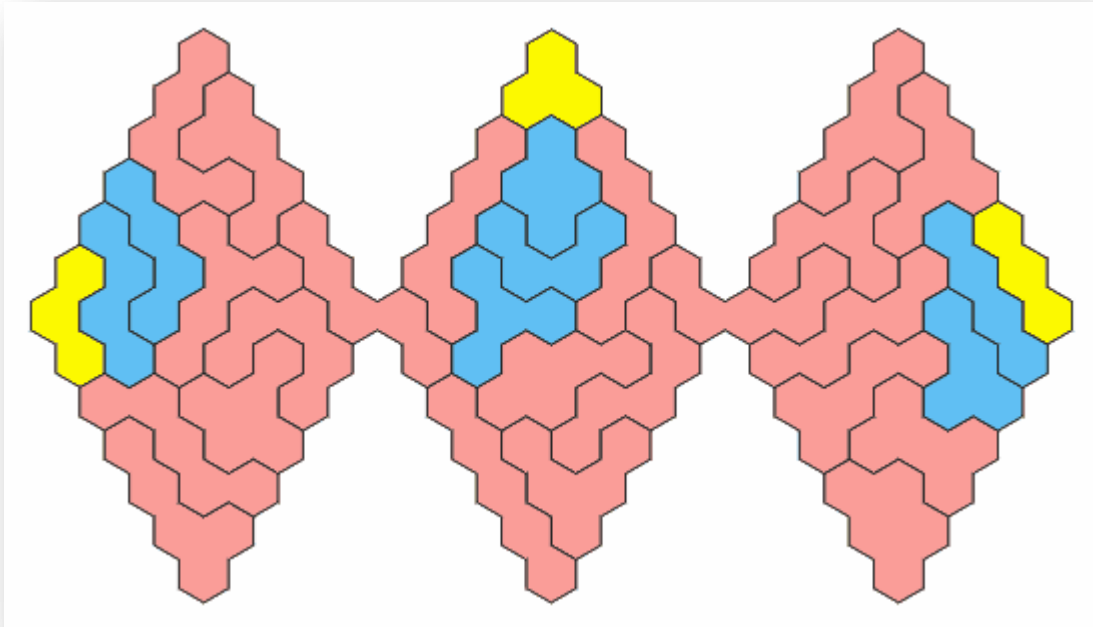


Figure 48: Tree of Life Triple Diamond Mandala – Horizontal Version

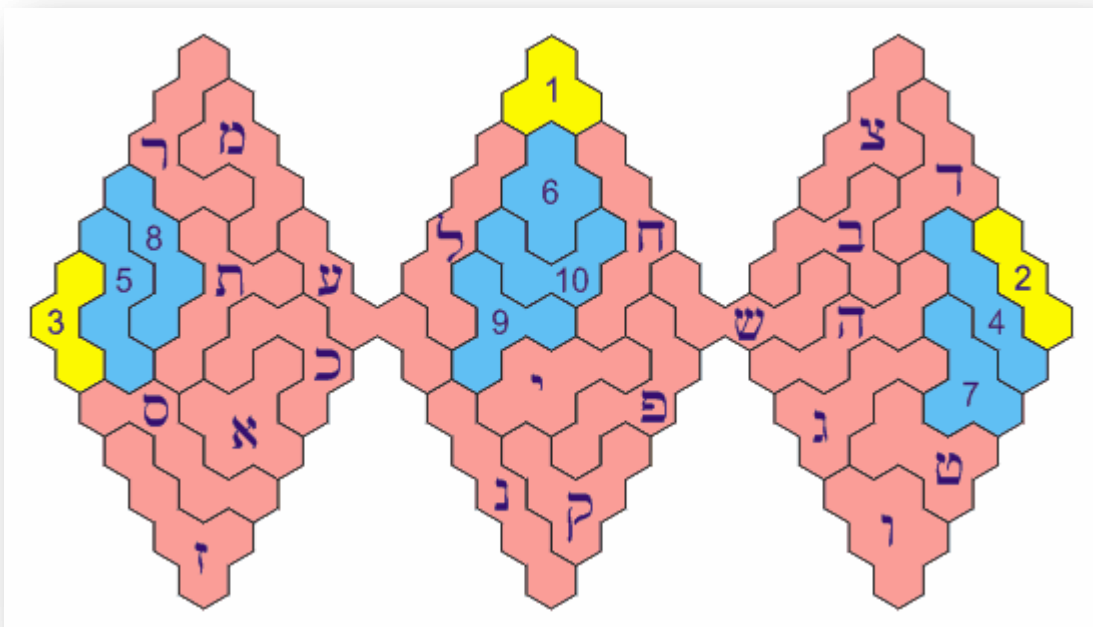


Figure 49: The Horizontal Triple Diamond Mandala - Labelled

Closer to the Tree of Life

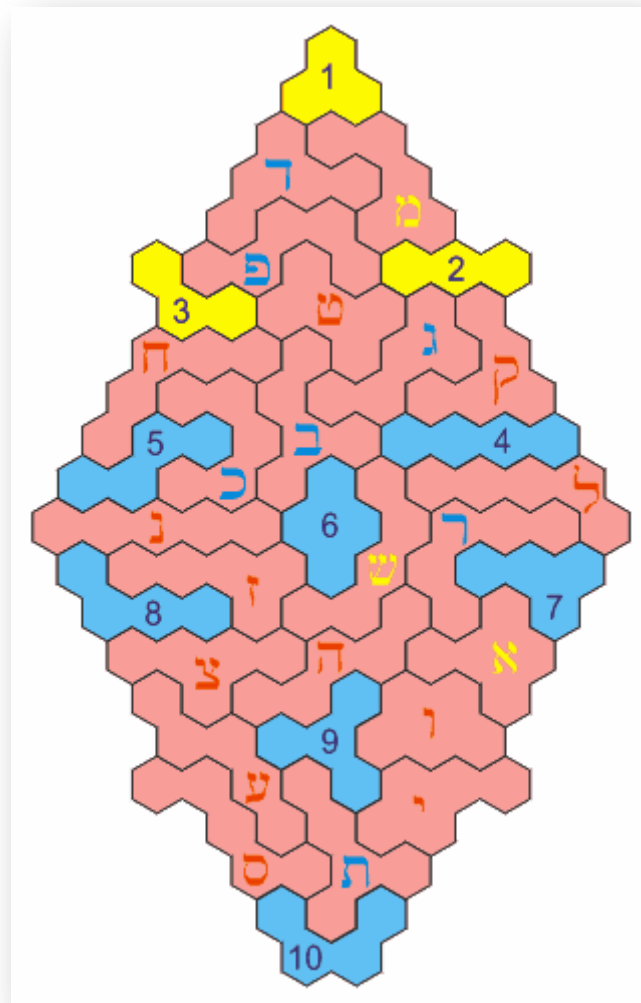


Figure 50: Closer to the Tree of Life

As you can see, the image above is closer in design and appearance to the actual kabbalistic Tree of Life diagram.

The ten sefirotic polyhexes are arranged according to the placements of their Tree of Life counterparts.

The twenty-two pathway pentahexes, however, are randomly arranged.

A Pentahex Hexagonal Mandala (22 Pentahexes)

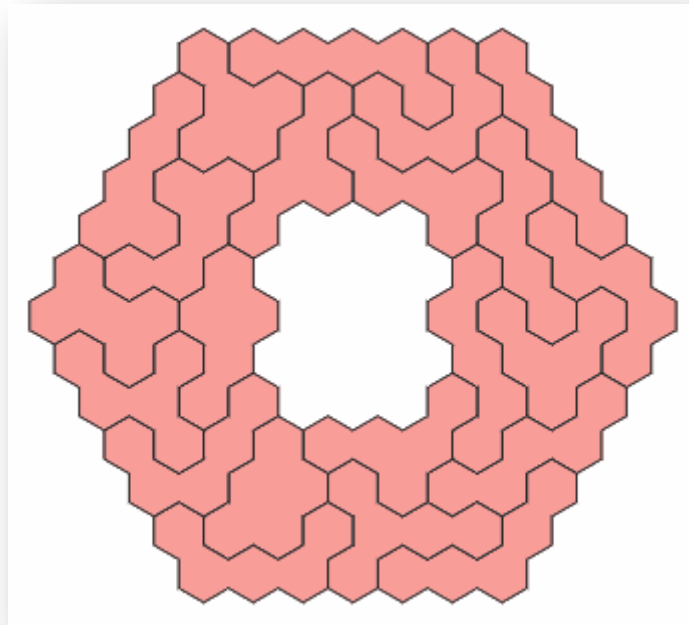


Figure 51: A Pentahex Hexagonal Mandala

The figure above incorporates all the twenty-two pentahexes, but in a quite compact hexagonal form.

A Pentahex Triangular Mandala (22 Polyhexes)

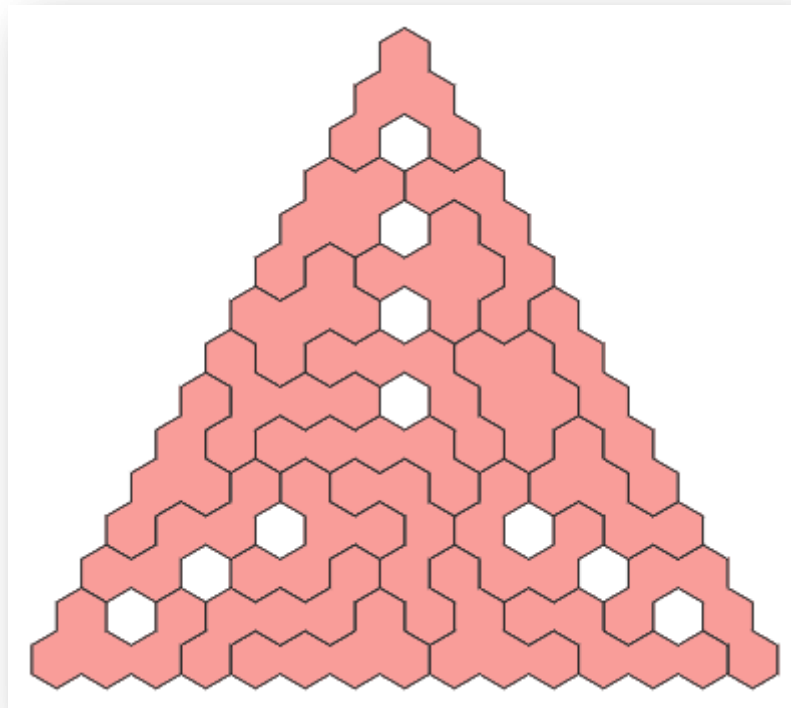


Figure 52: A Pentahex Triangular Mandala

The figure above arranges the twenty-two pentahexes in a triangular form with ten holes.

The ten holes can be considered to symbolise the ten sefirot of the Tree of Life amidst the twenty-two pentahex pathways.

A Pentahex Hexagonagram (22 Polyhexes)

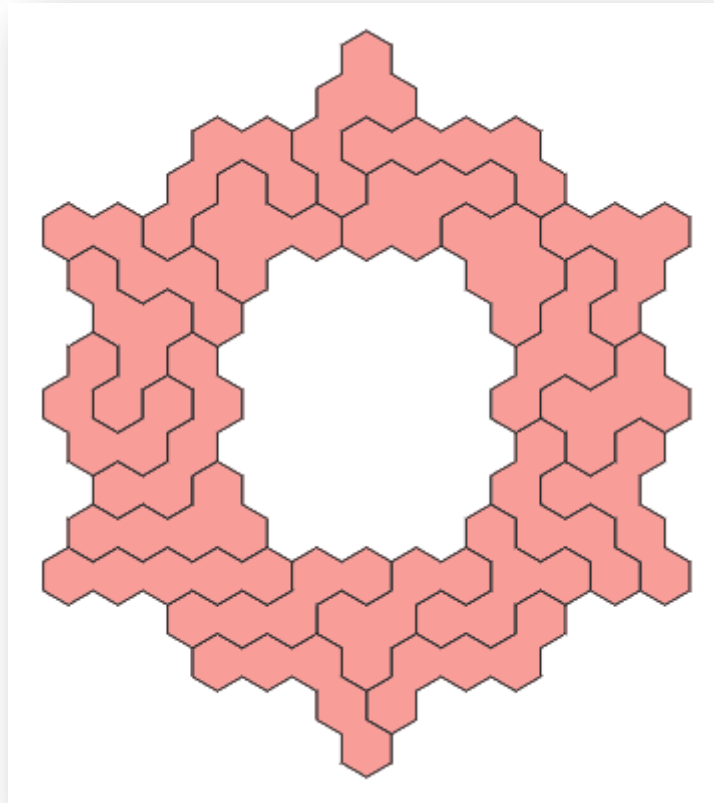


Figure 53: A Pentahex Hexagonagram

Again, I have designed this figure (above) so as to contain all twenty-two of the Tree of Life pathway pentahexes.

I invented the word 'hexagonagram' to describe this figure because it combines both the hexagon and hexagram shapes.

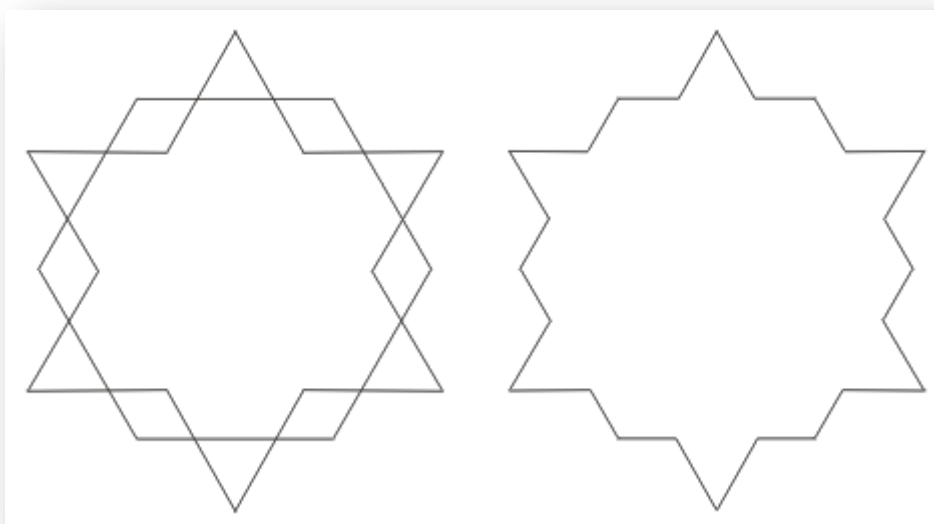


Figure 54: A Hexagonagram

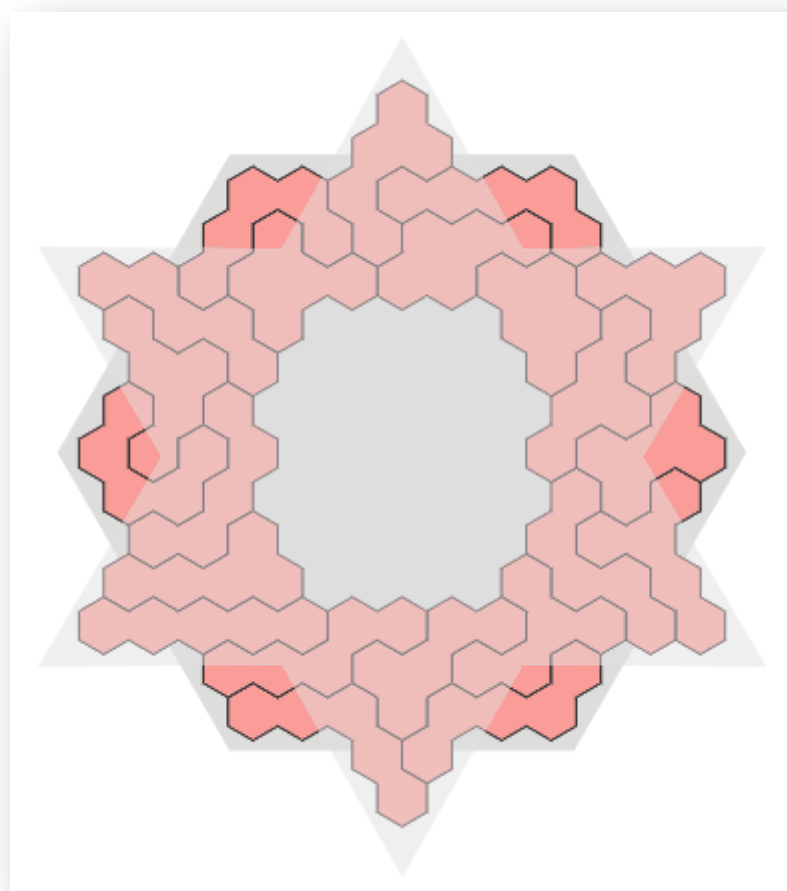


Figure 55: Combined Hexagon & Hexagram

Polyhex Divination

The thirty-two polyhexes of the 3-hex to 5-hex polyhex groups can be used practically as tools for meditation and divination.

For the purpose of divination (and meditation) thirty-two polyhex tiles should be created or obtained.

- 3-hex : 3 tiles
- 4-hex : 7 tiles
- 5-hex : 22 tiles

Total : 32 tiles

The 1-hex and 2-hex polyhexes are not employed in divination because they represent the two primordial veils, and therefore are beyond the manifested Creation as symbolised by the main body of the kabbalistic Tree of Life.

The three 3-hex tiles should be coloured yellow and be inscribed with the numbers 1, 2, and 3 (and possibly the Hebrew words for the supernal sefirot: Keter, Hockmah. and Binah).

The seven 4-hex tiles should be coloured blue and be inscribed with the numbers 4 to 10 (and possibly also the Hebrew words for the names of the seven lower sefirot).

The twenty-two 5-hex tiles should be coloured red and be inscribed with the twenty-two letters of the Hebrew alphabet.

Alternatively, the thirty-two polyhexes can be coloured according to your own inspiration and taste.

During the process of divination the polyhex tiles are used in the same manner as Celtic rune-stones—that is, they are placed in a cloth bag and drawn out singly, or scattered upon a flat surface in a cluster.

There are virtually no limits to the methods of use of the thirty-two polyhexes during divination. Use your imagination to discover different ways of using them.

For visual meditation purposes the polyhex tiles can be arranged into word-forms or shapes (as per my example designs above) and their sefirotic and pathway correspondences meditated upon during the construction process.