## Geometric Vowels - Tables

| Geometric Alphabet $\{$ Taha $\{\mathrm{d}=\mathrm{b}=\}$ |  |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| 32 Consonants Letters | $=$ | 22 Phoenician | + | 6 Arabic | + | 4 English |
| 18 Vowels | $=$ | 6 Arabic | + | 4 English | + | 8 French |

# Taha Method <br> Arabic Geometric Letters 

$$
\{d=b=\}
$$

## wAw Method <br> Latin Letters Matching Geometric Letters <br> Writing $\mathcal{A}$ rabic Way <br> \{อ土巴\}

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## 1- Writing Geometric method (Taha) \& writing Arabic way (wAw)

Geometric method (Taha) is a method of writing using Arabic Geometric letters. Reversed or mirrored geometric letters are used to write English or French texts (Taham). Latin matching letters are used for writing the same texts by using $\{\mathbf{w A w}\}$ method.

Geometric consonant letters consist of 13 Arabic un-pointed letters, 15 Arabic pointed letters and $\mathbf{4}$ additional English letters not available in Arabic. Un-pointed letters are made from simple basic geometric shapes depending on square shape.

The Geometric consonant letter represents a unique human sound and can be static marked by an optional mark of (Sukoon) or dynamic marked by a mandatory movement written above or below the letter or a (Waslah) after the letter and called a vowel in this case.

Geometric vowels or movements consist of 3 Arabic short movements represented by horizontal shapes, 3 Arabic long movements represented by similar but vertical shapes, 4 additional English movements and 8 additional French movements not available in Arabic.

The three Geometric letters (Alif, Waw and Yaa) are all consonant letters and could not be vowels any more. Geometric (Alif) and (Hamzah) are the name for the same consonant letter which has a unique sound and has one form for writing. (Hamzah) has no relationship with vowels.

The three Geometric marks of (Tanween) can be replaced by the three short movements followed by the letter n , while the Geometric letter stressed with (Shaddah) can be replaced by two identical letters where the first one is static while the second one is dynamic.

In order to write English and Arabic texts using matching Latin letters, the small and capital letters were redefined to achieve one to one relationship with Arabic Geometric letters.

Small Latin vowels are equivalent to short Arabic movements and capital Latin vowels are equivalent to long movements. French texts are written by using 8 additional vowels.

Capital Latin letters are used for the entry of all the 8 additional French specific vowels and a French specific Geometric font is used accordingly. These vowels can also be edited and replaced by combined small letters to produce French wAw texts using writing Arabic way (wAw).

As there is neither (Sukoon) nor (Hamzah) in English, a (Hidden Sukoon) will be assumed after each consonant letter not followed by a vowel, and a (Hidden Hamzah) will be assumed before each vowel at the beginning of a word starting by a vowel.

Two tables of Geometric Arabic, English and French vowels are shown in the following page. These vowels are produced by using an English keyboard for the entry of Latin matching letters and by using a Latin font and a Geometric font.
$\{T a h a\}\{d=b=\}$ and $\{w A w\}\left\{\sum^{2} \pm\right\}$, The Universal Method of Writing

The Geometric Taha \& wAw methods define consonant letters as human sounds and vowels as movements describing the process of launching and hearing these sounds.

A consonant letter is prepared by sending air stream through the Pharynx to generate continuous vibrations of oral cords which produce a certain sound which may remain static inside the oral cavity or may be launched outside to produce a dynamic consonant letter.

An Arabic word can't start by a static consonant. Instead, a dynamic letter called Hamzatulwasl is added at the beginning of that word to send the first stream of air. However, when this word is linked, Hamzatu-lwasl becomes redundant and unpronounced.

In Arabic, a consonant letter may be launched in one of the three main directions: up, by opening the mouth, to the front, by rounding the lips, or down, by making the cheeks loose. These directions determine the movements called (Fathah, Dummah, Kasrah). These are short movements and the sound is heard within a short period then vanishes.

However, the speaker is able to increase the force of launching a consonant letter to double the period of hearing the sound more clearly before it vanishes. These long movements called (Mad Fath, Mad Dum, Mad Kasr) contribute in words more than short ones.

The Arabs decided to optionally write short movements above or below consonant letters and long movements as mandatory vowels after consonant letters. Unfortunately, they used 3 existing consonant letters (Alif, Waw, Yaa) as vowels and as carriers of the consonant letter called Hamzah which complicated the Arabic writing and spelling.

An Arabic word can't start by a short or long movement or vowel. This is because a movement should be associated to a consonant letter while an English word can start by a static consonant as in (Station) or by a vowel as in (Africa). In reality, there is a hidden Hamzah at the beginning of words that start by a static consonant or a vowel.

There is no unified definition for a vowel in English. The letter (a) at the beginning of the word (Africa) represents a dynamic consonant while it represents a movement at the end. The two vowels (ou) in the word (hour) represent the dynamic consonant (w) and the only vowel (i) in the word (I) represents a dynamic consonant followed by the static one (y).

There are 4 additional English vowels: 2 short vowels called Kashah and Offah (e, o) as in (sell) and (of) and two long vowels called Mad Kash and Mad Off as in (sale) and (hole).

There are $\mathbf{4}$ additional French vowels: 2 short vowels called Summah and Lammah \{iu, eu\} as in (du, peu) and two long vowels called Mad Sum and Mad Lam as in (dur, peur) and 4 additional nasal vowels \{ii, uu, aa, oo\} as in \{vin, un, blanc, bon\}. Three charts of Geometric Arabic, English and French vowels are shown in the next pages.


## 2－Geometric Vowels Tables for Arabic，English and French

1－The 6 Arabic Geometric vowels are a subset of the $\mathbf{1 0}$ English vowels which are a subset of the 18 French vowels as follows：

## i－Arabic Geometric Vowels

1－Short Arabic Vowels or movements：Fathah，Dummah，Kasrah
2－Long Arabic Vowels or movements：Mad Fath，Mad Dum，Mad Kasr
3－Tanween Marks（short vowels plus static n）：Fathatan，Dummatan，Kasratan

## ii－Arabic \＆English Geometric Vowels

1－Short English Vowels：Fathah，Dummah，Kasrah，Kashah，Offah
2－Long English Vowels：Mad Fath，Mad Dum，Mad Kasr，Mad Kash，Mad Off

| Kasratan | Pummatan | Tathatan | Mad Off | Mad <br> Kash | Mad <br> Kasr | Mad Dum | Mad <br> Fath | Offah | Kashah | Kasrah | Dummah | Fathah |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| كسرتان | ضمتان | فتحتان | مد أوف | مد كسح | مد كسر | مد ضم | مد فتح | أفة | كسحة | كسرة | ضمة | فتحة |
| 三 | 뜨느에 | 三 | d | 클 | T | q | 1 | ㄲ | m | $=$ | ㄱ | $=$ |
| in | on | an | O | E | I | U | A | 0 | e | i | u | a |

Arabic \＆English Geometric Vowels Table

## iii－Arabic，English \＆French Geometric Vowels

1－Short French Vowels：Fathah，Dummah，Kasrah，Kashah，Offah，Sammah，Lammah
2－Long French Vowels：Mad Fath，Mad Dum，Mad Kasr，Mad Kash，Mad Off，Mad Sum， Mad Lam
3－Nasal French Vowels：Naf Fath，Naf Dum，Naf Kasr，Naf Off

| French Vowels | Naf Fath نف فتح | Naf Dum نف ضم | Naf Kasr نف كسر | Naf Off نف أوف | Summah صمّة | Lammah لمّة | Mad Sum مد صم | Mad Lam مد لم |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Latin Font | L | M | N | G | X | Y | J | R |
| Geom．Font | 三 | $\underline{\square}$ | $\equiv$ | 뜬 | $\pm$ | $\underline{1}$ | 冎 | $\pm$ |
| wAw letters | aa | uu | ii | OO | iu | eu | Iu | Eu |
| French words | an，en | un | vin | nom | du | peu | dur | peur |
| wAw words | aa | uu | vii | noo | diu | peu | dIur | pEur |

French Specific Geometric Vowels Table

