

# **Coptic Number Translator Tutorial**

## **Introduction**

Coptic numbers have developed closely from their ancient Egyptian forms and still closely resemble them phonetically. The ancient Egyptian language for the most part has retained a remarkable degree of integrity for thousands of years to this day. However, the script in which the language has been written has changed over time. Egyptian was initially written in Hieroglyphics for aesthetic purposes such as to decorate temples. Simultaneously, however, the priests and learned people of Egypt used a simplified script modelled on the Hieroglyphs named hieratic for everyday purposes, such as keeping accounts and letter writing. By the Hellenistic period, a new highly cursive script with fewer characters named Demotic emerged, which was derived directly from the Hieratic. In 332 B.C. Alexander the Great invaded Egypt and brought with him his Grecian culture. Some time after, the Egyptians gradually began to substitute Greek characters in place of the Demotic characters. Eventually the Egyptians had adopted all 24 Greek letters into their new script, along with 7 modified Demotic characters for sounds unique to the Egyptian language. This emergent script is now known as Coptic - the Egyptian language, written in Greek and Demotic characters.

The Coptic language developed into numerous dialects along the length of the Nile, each employing different vowels in pronouncing the same words and having only some variation in vocabulary. Bohairic was the dialect of the Nile Delta, but a different dialect named Sahidic, which developed in Upper Egypt, became the dominant form from the earliest times and is the dialect in which most Coptic literature is written. However, with the coming of the Arabs and the Arabic language, Coptic as a whole declined in its use as Egyptians were forced to learn Arabic. It is Bohairic that survives today, preserved mainly in the liturgy of the Coptic Orthodox Church. It is therefore the Bohairic forms of the Coptic numbers that are described here, from which the Sahidic forms vary slightly.

## **Greek numeral system**

With the introduction of Hellenic culture, the Greek numeral system also came into use, whereby the letters of the alphabet together with a single super-linear stroke (double for the thousands and a triple for the millions and so on) came to represent the basic components of the number system. The ancient Egyptian number system did not have a number zero and so a Coptic numeral for zero was never assigned. As a result, the numeral system was not as advanced as the system we use today, which uses the numeral zero as a place-holder. Coptic numerals are formed by placing the basic components of a number one after the other in descending order e.g.  $\overline{\text{TN}}$  "350". Further examples are given hereafter.

## **Basic cardinal numbers**

Generally all basic Coptic numbers exist in a distinct masculine and feminine form, except for the tens larger than 20. All the numbers have only an absolute form, except for the number ten, which takes a different construct form when combined with a unit. Owing to the various dialects in Coptic, some numbers occur in several slightly different forms. Less common variants are given in brackets. As explained before, Coptic does not have a number zero.

	Masculine		Feminine	
	Numeral	Coptic name	Numeral	Coptic name
1	ⲁ̅	ⲟⲩⲁⲓ	ⲁ̅ⲥ	ⲟⲩⲓ
2	ⲃ̅	ⲥⲛⲁⲩ	ⲃ̅ⲥ	ⲥⲛⲟⲩⲥ
3	Ⲅ̅	ⲩⲟⲙⲦ	Ⲅ̅ⲥ	ⲩⲟⲙⲥ
4	ⲅ̅	ⲩⲧⲟⲟⲩ (ⲩⲧⲱⲟⲩ, ⲩⲧⲟⲩ)	ⲅ̅ⲥ	ⲩⲧⲟⲈ
5	Ⲇ̅	ⲧⲓⲟⲩ (ⲧⲓⲟⲩ, ⲧⲟⲩ)	Ⲇ̅ⲥ	ⲧⲓⲈ (ⲧⲓⲈ)
6	ⲇ̅	ⲥⲟⲟⲩ	ⲇ̅ⲥ	ⲥⲟ (ⲥⲟⲈ)
7	Ⲉ̅	ⲩⲗⲩⲥ	Ⲉ̅ⲥ	ⲩⲗⲩⲥⲓ
8	ⲉ̅	ⲩⲙⲙⲛ	ⲉ̅ⲥ	ⲩⲙⲙⲛⲓ
9	Ⲋ̅	ⲩⲓⲧ	Ⲋ̅ⲥ	ⲩⲓⲧ
10	ⲋ̅	ⲙⲙⲦ, ⲙⲈⲦ-	ⲋ̅ⲥ	ⲙⲙⲦ, ⲙⲈⲦ-
20	Ⲍ̅	ⲩⲱⲧ	Ⲍ̅ⲥ	ⲩⲱⲥ
30	ⲍ̅	ⲙⲁⲡ, ⲙⲁⲃ		
40	Ⲏ̅	ⲩⲙⲈ		
50	ⲏ̅	ⲧⲈⲟⲩⲓ (ⲧⲁⲓⲟⲩ, ⲧⲈⲃⲓ)		
60	Ⲑ̅	ⲥⲈ		
70	ⲑ̅	ⲩⲃⲈ (ⲩⲥⲈ)		
80	Ⲓ̅	ⲕⲁⲙⲛⲈ		
90	ⲓ̅	ⲡⲓⲥⲧⲈⲟⲩⲓ (ⲡⲓⲥⲧⲁⲩ)		
100	Ⲕ̅	ⲩⲈ		
200	ⲕ̅	ⲥⲛⲁⲩ ⲛⲩⲩⲈ (ⲩⲙⲓ)		
1,000	Ⲗ̅	ⲩⲟ		
10,000	ⲗ̅	ⲙⲙⲦ ⲛⲩⲩⲟ (Ⲉⲃⲁ)		
1,000,000	Ⲙ̅	ⲩⲟⲛⲩⲩⲟ (ⲩⲈ ⲛⲩⲃⲁ)		

Note: where the feminine forms are not given, they are identical to the masculine. The following examples in this document will give the masculine form.

### Cardinal numbers: the units 1-9

The Coptic units are formed simply as they are presented in the above table e.g. **ΤΙΟΥ** "five".

### Cardinal numbers: the tens 10-99

Larger Coptic numbers are formed by placing the tens particle before the units particle e.g. **ἕΜΕ ὠΟΜΤ** "forty three". The numbers 11 to 19 are an exception because a construct form for the number ten exists. For these numbers the unit is attached directly after the construct form of 10 (**ΜΕΤ-**) e.g. **ΜΕΤὠΜΗΝ** "eighteen".

	Numeral	Coptic name
10	ἰ̄	ΜΗΤ
12	ιβ̄	ΜΕΤϸΝΑΥ
17	ιζ̄	ΜΕΤωαωϸ
30	λ̄	ΜΑΠ
51	νᾱ	ΤΕΟΥΙ ΟΥΑΙ
95	ϸε̄	ΠΙCTΕΟΥΙ ΤΙΟΥ

### Cardinal numbers: the hundreds 100-999

In Coptic, these numbers are formed by placing the hundreds particle before the tens and units particles. The hundreds particle is generally formed by placing the number of the hundreds before a connecting particle **ἵ**, which is directly attached to **ωε** "hundred" e.g. **ψΙΤ ἵωε** "nine hundred". However, this does not apply to the numbers 100-199, where the hundreds particle is simplified to **ωε** "one hundred". "Two hundred" can alternatively be written **ωΗΙ**. The hundreds particle is attached to tens and units by **ΝΕΜ** "with" or "and" e.g. **ωε ΝΕΜ ΜΕΤωΟΜΤ** "one hundred and thirteen".

	Numeral	Coptic name
100	ρ̄	ωε
188	ρπ̄η	ωε ΝΕΜ ἡΑΜΝΕ ὠΜΗΝ
446	γμ̄ς	ἔΤΟΟΥ ἵωε ΝΕΜ ἕΜΕ COΟΥ
700	ψ̄	ωαωϸ ἵωε
834	ωλ̄Δ	ὠΜΗΝ ἵωε ΝΕΜ ΜΑΠ ἔΤΟΟΥ
999	ωϸθ̄	ψΙΤ ἵωε ΝΕΜ ΠΙCTΕΟΥΙ ψΙΤ

### Cardinal numbers: the thousands 1,000-999,999

The thousands particle is constructed in a similar way to the hundreds. The number of thousands is placed before **ἵωο** after which the rest of the number

is placed e.g. **ΜΕΤΟΥΧΙ ΝΩΟ** "eleven thousand". The numbers 1,000-1,999 (as with the numbers 100-199) are represented with the thousands particle simplified to **ΩΟ** "one thousand". The number 10,000 also has a special form **ΘΒΑ**, which may be used. Thus, it and larger numbers (10,000-9,999,999) may be formed with 10,000 as its base instead of 1,000 e.g. **ΨΒΕ ḲΝΑΥ ḲΘΒΑ** "seventy two ten thousand" instead of **ΩΑΩϥ ḲΩΕ ΝΕΜ ΧΩΤ ḲΩΟ** "seven hundred and twenty thousand".

	Numeral	Coptic name
1,000	ⲁ̅	ΩΟ
1,825	ⲁ̅ⲱⲕⲉ̅	ΩΟ ΨΜΗΝ ḲΩΕ ΝΕΜ ΧΩΤ ΤΙΟΥ
8,892	Ⲭ̅ⲱϥⲃ̅	ΨΜΗΝ ḲΩΟ ΨΜΗΝ ḲΩΕ ΝΕΜ ΠΙCΤΕΟΥΙ ḲΝΑΥ
28,654	ⲕ̅ⲬⲭⲚⲁ̅	ΧΩΤ ΨΜΗΝ ḲΩΟ CΟΥ ḲΩΕ ΝΕΜ ΤΕΟΥΙ ḲΤΟΥ
364,146	ⲧ̅ϩⲁⲣⲙϩ̅	ΩΟΜΤ ḲΩΕ ΝΕΜ CΕ ḲΤΟΥ ḲΩΟ ΩΕ ΝΕΜ ḲΜΕ CΟΥ
989,991	ⲱ̅ⲡ̅Ⲟ̅ⲱϥⲁ̅	ΨΙΤ ḲΩΕ ΝΕΜ ḲΑΜΝΕ ΨΙΤ ḲΩΟ ΨΙΤ ḲΩΕ ΝΕΜ ΠΙCΤΕΟΥΙ ΟΥΑΙ

### Cardinal numbers: the millions 1,000,000-999,999,999

The millions particle is constructed in the same way as the hundreds and thousands. In Coptic "thousand" is written **ΩΟḲΩΟ** (or alternatively **ΩΕ ḲΘΒΑ**). Likewise, the number "one million" is simply written **ΩΟḲΩΟ**. The millions particle is in the same way placed before the lesser magnitude particles of the thousands, hundreds, tens and units.

	Numeral	Coptic name
1,000,000	ⲁ̅̅̅	ΩΟḲΩΟ
1,938,627	ⲁ̅̅̅ⲱ̅Ⲭⲭⲕⲗ̅	ΩΟḲΩΟ ΨΙΤ ḲΩΕ ΝΕΜ ΜΑΠ ΨΜΗΝ ḲΩΟ CΟΥ ḲΩΕ ΝΕΜ ΧΩΤ ΩΑΩϥ
4,273,645	ⲁ̅̅̅ⲁ̅CⲞⲬⲭⲙⲉ̅	ḲΤΟΥ ḲΩΟḲΩΟ ḲΝΑΥ ḲΩΕ ΝΕΜ ΨΒΕ ΩΟΜΤ ḲΩΟ CΟΥ ḲΩΕ ΝΕΜ ḲΜΕ ΤΙΟΥ
93,273,984	ⲙ̅Ⲏ̅CⲞⲬⲱ̅ⲡ̅ⲁ̅	ΠΙCΤΕΟΥΙ ΩΟΜΤ ḲΩΟḲΩΟ ḲΝΑΥ ḲΩΕ ΝΕΜ ΨΒΕ ΩΟΜΤ ḲΩΟ ΨΙΤ ḲΩΕ ΝΕΜ ḲΑΜΝΕ ḲΤΟΥ
345,678,901	ⲧ̅̅̅ⲙⲉ̅ϫⲞⲬⲱ̅ⲁ̅	ΩΟΜΤ ḲΩΕ ΝΕΜ ḲΜΕ ΤΙΟΥ ḲΩΟḲΩΟ CΟΥ ḲΩΕ ΝΕΜ ΨΒΕ ΨΜΗΝ ḲΩΟ ΨΙΤ ḲΩΕ ΝΕΜ ΟΥΑΙ
899,263,495	ⲱ̅̅̅ⲱ̅ϥⲞ̅Cϩ̅Ⲏ̅ϥ̅	ΨΜΗΝ ḲΩΕ ΝΕΜ ΠΙCΤΕΟΥΙ ΨΙΤ ḲΩΟḲΩΟ ḲΝΑΥ ḲΩΕ ΝΕΜ CΕ ΩΟΜΤ ḲΩΟ ḲΤΟΥ ḲΩΕ ΝΕΜ ΠΙCΤΕΟΥΙ ΤΙΟΥ

### Forming ordinal numbers

In Coptic, ordinal numbers are formed simply by placing **μα2** "to fill" before the written cardinal number or numeral e.g. **μα2** **ⲱⲁⲱϣ** "seventh" or **μα2** **ⲗ** "7th". The only exception occurs in the ordinalisation of the number "one", which becomes **ⲗⲐⲮⲐⲦ** (masc.) or **ⲗⲐⲮⲐⲦ** (fem.) "first".

	<b>Numeral</b>	<b>Coptic name</b>
<b>1st</b>	<b>μα2</b> <b>ⲁ</b>	<b>ⲗⲐⲮⲐⲦ</b>
<b>18th</b>	<b>μα2</b> <b>ⲐⲬ</b>	<b>μα2</b> <b>ⲙⲈⲦⲱⲙⲬⲚ</b>
<b>722nd</b>	<b>μα2</b> <b>ⲮⲔⲃ</b>	<b>μα2</b> <b>ⲱⲁⲱϣ</b> <b>ⲚⲱⲈ</b> <b>ⲚⲈⲘ</b> <b>ϣⲱⲦ</b> <b>ϸⲚⲁⲮ</b>
<b>5,333rd</b>	<b>μα2</b> <b>ⲈⲦⲗⲮ</b>	<b>μα2</b> <b>ⲦⲐⲐⲮ</b> <b>ⲚⲱⲐ</b> <b>ⲱⲐⲐⲦ</b> <b>ⲚⲱⲈ</b> <b>ⲚⲈⲘ</b> <b>ⲙⲁⲡ</b> <b>ⲱⲐⲐⲦ</b>
<b>296,275th</b>	<b>μα2</b> <b>ϸϣϸⲐⲈ</b>	<b>μα2</b> <b>ϸⲚⲁⲮ</b> <b>ⲚⲱⲈ</b> <b>ⲚⲈⲘ</b> <b>ⲡⲐϸⲦⲈⲐⲮⲐ</b> <b>ϸⲐⲐⲮ</b> <b>ⲚⲱⲐ</b> <b>ϸⲚⲁⲮ</b> <b>ⲚⲱⲈ</b> <b>ⲚⲈⲘ</b> <b>ⲱⲃⲈ</b> <b>ⲦⲐⲐⲮ</b>
<b>27,395,387th</b>	<b>μα2</b> <b>ⲔⲗⲦⲈⲦⲡⲗ</b>	<b>μα2</b> <b>ϣⲱⲦ</b> <b>ⲱⲁⲱϣ</b> <b>ⲚⲱⲐⲚⲱⲐ</b> <b>ⲱⲐⲐⲦ</b> <b>ⲚⲱⲈ</b> <b>ⲚⲈⲘ</b> <b>ⲡⲐϸⲦⲈⲐⲮⲐ</b> <b>ⲦⲐⲐⲮ</b> <b>ⲚⲱⲐ</b> <b>ⲱⲐⲐⲦ</b> <b>ⲚⲱⲈ</b> <b>ⲚⲈⲘ</b> <b>ⲕⲁⲙⲚⲈ</b> <b>ⲱⲁⲱϣ</b>

## References

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