

A guide to numerals in Syriac

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1 Syriac alphabetic numerals

Syriac numerals are traditionally written with the letters of the alphabet. The system is very similar to the alphabetic numerals traditionally used in Hebrew, Arabic (the *abjadi* numerals), Armenian, Greek and Cyrillic. Where it is necessary to make sure that the reader does not try to read them as words they are written overlined. Thus, the numeral for 35 is written $\overline{\text{ܕܗ}}$, and the overline tells us not to read it as *leh* ‘to him’ or *lah/loh* ‘to her’. The overline is often omitted where the context means it can only be read as a numeral, when it is a page number in the header or footer, or when it is followed by the name of a month (e.g. $\overline{\text{ܕܗ}} \text{ܩܘܢܝܢ}$ is 25 December).

The appendix to Theodor Nöldeke’s *Kurzgefaßte syrische Grammatik* offers a short introduction to the use the letters of the Syriac alphabet as numerals. After briefly noting how the letters from } to ܠ suffice for the numerals 1–499, he goes on to describe how the decades from ܥ to ܘ are recycled to provide the numerals for 500–900, taking the raised point to distinguish them as centuries rather than their usual decade values. Therefore, the letter ܘ, which is usually

sign rather than additive). The numerals are written with the highest on the right and lowest on the left, with the exception that the sign for 1 is always written before 2, and so 8 is written 𐤠𐤁=5+1+2. The number 365 is written as 𐤁𐤀𐤀𐤀𐤁𐤀=(1+2)×100+20+20+20+5.

Table 3: System of old Syriac sign–value numerals

1	2	3	4	5	6	7	8	9	10	11	12	15	19	20	30
𐤀	𐤁	𐤂	𐤃	𐤄	𐤅	𐤆	𐤇	𐤈	𐤉	𐤊	𐤋	𐤌	𐤍	𐤎	𐤏
					40	100	101	200	203		697				
					𐤀	𐤁	𐤂	𐤃	𐤄	𐤅	𐤆𐤀𐤀𐤀𐤁				

Two other signs exist in the system, but they are not always used. The symbol 𐤄 stands for the number 500. Thus, the numeral for 697 above could be written as 𐤆𐤀𐤀𐤀𐤁𐤄. The symbol 𐤇𐤇 or 𐤇 is an oddity as it either represents the number 300 or 800; the understanding of it as 800 obviously includes an implied 𐤄.

There is no evidence for how thousands or higher numerals should be written in this system. Only the Aramaic numerals at Elephantine witness to a thousands sign, which operates as a multiplier in the same manner as the hundreds sign.

Duval shows a couple of examples of hybrid numerals that combine these sign–value numerals with alphabetic numerals: 820 𐤁𐤀𐤀, 824 𐤁𐤀𐤀, 840 𐤆𐤀𐤀, 563 𐤄𐤆𐤀𐤄.

4 Appendix: on numerals in the Payne Smiths’ dictionaries

Below are the collected entries for the numerical utility of each letter of the Syriac alphabet from the two great dictionaries of the Payne Smiths, father and daughter (tables 4 and 5, pp. 7–8). I have included them as they witness a few irregularities of the system of alphabetic numerals outlined above. While many of the entries are straightforward, I shall first excerpt the oddities.

Robert Payne Smith’s entry for 𐤁 gives the numeral for 2000 as 𐤁. However, Jessie Payne Smith suggests that the higher numerals created with 𐤁 are different in East- and West-Syriac tradition: the West Syriac having 𐤁 for 2000, while the East Syriac has 𐤁 for 2000 and 𐤁 for 20,000.

Again, with the letter 𐤆, the two differ over the marking of the numeral 7000. Robert gives 𐤆, which is in keeping with the system described above, while Jessie gives 𐤆̄.

For 𐤆, Robert gives the unexpected value of 800 for the sign 𐤆, rather than 8000.

For 𐤆, Robert gives the unusual mark of 𐤆̄ for 300, rather than the expected 𐤆. Jessie gives the latter sign but values it at 3000!

For 𐤆, both Payne Smiths give 𐤆 as the sign for 700.

For 𐤆, both agree that the underline marks myriads, and thus 𐤆̄ is 200 myriads, or 2,000,000.

Then they both change their minds by making 𐤆̄ value just 4000!

5 Bibliography

- AMIRA, GEORGIUS MICHAEL [ܘܡܝܪܐ ܓܝܘܪܝܘܫ ܡܝܚܐܝܠ] (1596). *Grammatica Syriaca, siue Chaldaica* [ܘܡܝܪܐ ܓܝܘܪܝܘܫ ܡܝܚܐܝܠ ܘܚܘܪܐܝܢܐ ܕܥܘܠܡܐ]. Rome.
- COSTAZ, LOUIS (1963). *Dictionnaire syriaque–français: Syriac–English Dictionary: قاموس سرياني عربي*. Beirut.
- DUVAL, RUBENS (1881). *Traité de Grammaire syriaque*. Paris.
- NÖLDEKE, THEODOR (1880). *Kurzgefaßte syrische Grammatik*. Leipzig.
- PAYNE SMITH, JESSIE (1903). *A Compendious Syriac Dictionary: Founded upon the Thesaurus Syriacus of R. Payne Smith*. Oxford.
- PAYNE SMITH, ROBERT (1879). *Thesaurus Syriacus*. Oxford.
- PHILLIPS, GEORGE (1866). *Syriac Grammar*. Cambridge.

Table 5: Numerical descriptions of letters 𐤌–𐤎 in dictionaries

letter	Robert Payne Smith's <i>Thesaurus Syriacus</i>	Jessie Payne Smith's <i>Compendious Syriac Dictionary</i>
𐤎	In numerando valet 𐤎 30, 𐤍 31, etc., 𐤎 300, 𐤍 301, etc., Amir. 15.	As a numeral, 𐤎 30, 𐤍 31, 𐤎 32 &c., 𐤎 3000.
𐤍	In numerando valet <i>quadraginta</i> , Amir. 13; 𐤎 𐤌𐤍𐤋𐤀 <i>carmen quadragesimum</i> , B.O. iii. i. 331; at 𐤍 <i>quadringenti</i> et 𐤍 <i>quadraginta millia</i> , Amir. 15, 19.	The numeral 40, 𐤍 𐤌𐤍𐤋𐤀 <i>Discourse</i> 40; 𐤍 400.
𐤌	In numerando valet <i>quingenta</i> , et 𐤌 <i>quingenti</i> , Amir. 13, 15; it. cum 𐤌, praef. <i>quingagesimus</i> .	The number 50, with 𐤌, <i>the fiftieth</i> .
𐤋	quae in numerando <i>sexaginta</i> valet, et cum puncto supra posito 𐤋 <i>sexcenti</i> , Amir. 13, 15.	The numeral 60; with a point, 𐤋, 600.
𐤊	Quae numerando valet <i>septuaginta</i> , et cum 𐤊, praef. <i>septuagesimus</i> ; it. cum linea supraducta 𐤊 <i>septingenti</i> .	As a numeral 70; with 𐤊, prefixed <i>the seventieth</i> ; with a line above, 𐤊, 700.
𐤉	Quae numerando <i>octoginta</i> valet, et cum 𐤉, praef., <i>octogesimus</i> , it. cum puncto supra posito 𐤉 <i>octingenti</i> , Amir. 6, 13, 15, BHGr. 36. 9, 11, BH-Schol. in Act. i. 2, Ephr. i. 308 B.	As a numeral <i>eighty</i> ; with 𐤉, prefixed <i>the eightieth</i> ; with a point above, 𐤉, 800.
𐤈	[?] In numerando valet <i>octoginta</i> , et cum puncto suprascripto, 𐤈, <i>octingenti</i> , Amir. 13, 15.	The number 90, with a point above, 𐤈, 900.
𐤇	In numerando valet 𐤇 <i>centum</i> ; it. 𐤇, <i>centesimus</i> .	The numeral 100, 𐤇, <i>the one hundredth</i> .
𐤆	In numerando valet <i>ducenti</i> ; cum 𐤆, praefixa <i>ducentesimus</i> ; cum linea supposita 𐤆, 2,000,000, Amir. 14–20.	The numeral 200, 𐤆, <i>the two hundredth</i> ; with a line beneath, 𐤆, 2,000,000.
𐤅	In numerando valet <i>trecenti</i> , ib. 14; it. cum 𐤅, praefixa <i>trecentesimus</i> .	The number <i>three hundred</i> , with 𐤅, 𐤅, <i>the three hundredth</i> .
𐤄	In numerando valet <i>quadringenti</i> , cum 𐤄, praefixa <i>quadringentesimus</i> , cum lineola subscripta, 𐤄, <i>quatuor millia</i> , Amir. 14, 20.	The numeral 400; with 𐤄, 𐤄, <i>the four hundredth</i> ; with a line beneath, 𐤄, 4000.