

Maya Calendars and Writing: 1

Numbers and Calendars

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Overview

- Numbers
- Calendars
 - Tzolk'in
 - Haab
 - Long Count
- Distance numbers
- Lords of the night
- Lunar series



References

- Michael D. Coe and Mark Van Stone, Reading the Maya Glyphs, 2nd edition
- Inga E. Calvin, Maya Hieroglyphics Study Guide
- Harri Kettunen and Christophe Helmke, Introduction of Maya Hieroglyphs



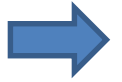
Numbers

- Base 20 as compared with our base of 10
- Bars (5), dots (1) and spacers
- Head and full figure variants
 - Look for key distinguishing features
- Zero
- Place system for numbers?
- See Kettunen Table VIII for number glyphs

Tzolk'in

- Ceremonial / religious calendar
- 260 day year
- 20 day signs, numerical coefficient 1-13
- Works like interlocking gears:
 - Each day add one to the coefficient and move one up the list of day signs
 - 1 IMIX  2 IK'  3 Ak'bal
 - Comes back to 1 IMIX after 260 days
- Like the number in our date and days of the week
- See Kettunen Table XII for day name glyphs

HAAB year



- Day to day calendar
- 365 day year (no leap years, so slips)
- 18 months of 20 days, plus 5 day month
- Works like:
 - Our number dates and months
 - the odometer in your car
 - 1 POP  2 POP  3 POP ... 19 POP  0 WO
- Any given date in Haab and Tzolk'in calendars recurs again after about 52 years
- See Kettunen Table XIII for month glyphs

Exercises

- Count 4 days from 2 IMIX 3 WO
- Count 5 days from 10 KAWAK 18 WO

- Answer 1: 6 CHIKCHAN 7 WO
- Answer 2: 2 KAN 3 SIP

Long Count

- Introduced by the Initial Series Introductory Glyph (ISIG) – often double or quadruple size
- Uses a 360 day year, but goes on forever
 - 18 months of 20 days
- Written as 5 (or more) numbers separated by dots:
 - 9.5.7.0.0  9.5.7.0.1
 - 9.19.19.17.19  10.0.0.0.0
- See Kettunen Table XI for period name glyphs

Distance Numbers

- Counting forward or backwards from the date
- Similar format to long count, but backwards, i.e., KIN first
- Says to counts forwards or backwards by this amount
- $9.5.7.0.0 + 3.5.6 = 9.5.10.5.6$
- $9.5.7.17.18 + 13.5.6 = 9.6.1.5.4$
- Arithmetic is modulo 20, except in second position where modulo 18

Lords of the Night & Lunar Series

- Lords of the Night: 9 day cycle – like a 9 day week
- Lunar series:
 - Up to 6 glyphs describing the state of the moon
 - Lunar month is 29.5 days, so the Maya said it was 29 or 30
 - Provide number of days into the cycle
 - Has a cycle of 6 lunar months, so tells which cycle of the 6.
- See Kettunen Table X for Lords of the Night and Calvin page 16 for Lunar Series glyphs

Next session

- History of decipherment
 - 1800s, 1900-1950s, 1950s to now
- Language structure
 - Reading order
 - Sentence structure
 - Reading a glyph block
- Acknowledgement: The tables of glyphs used in these presentations are all from Inga Calvin's "Maya Hieroglyphic Study Guide" and Kettunen & Helmke's "Maya Hieroglyphs" and used with gratitude for having produced such convenient and accessible guides.

Palenque Temple XIX, West tablet of Platform – Examples of applying distance numbers

9	6	7	0	0 CR	7 Ajau	8 Kayab	Imputed from the two landmarks below
	8	13	0	0 DN			
9	15	0	0	0 CR	4 Ajau	13 Yax	15th Katun
		2	7	16 DN			
9	15	2	7	16 CR	9 Kib	19 Kayab	
			1	4 DN	Expressed as 24		
9	15	2	9	0 CR	7 Ajau	3 Wayeb	
		2	6	17 DN			
9	15	4	15	17 CR	6 Kaban	5 Yaxkin	
			2	3 DN			
9	15	5	0	0 CR	10 Ajau	8 Chen	5 stones