

This page is extracted from *Quettar Special Publication No. 1*, 'The Writing Systems of Middle-earth', by David Doughan and Julian Bradfield, published in 1987.

Part III: Numerals

The tengwar numerals were found and presented to *Quettar* by Christopher Tolkien (see *Quettars* 13 and 14). The following is adapted therefrom.

For lists, series and the like, the *tengwar* from 1 to 24 (ρ , ρ , ..., α) were used, just as we use (a), (b), A sign such as a dot or bar above could be used, e.g. $\bar{\rho}$ or $\dot{\rho}$.

For numbers proper, the Eldar used both a decimal and a duodecimal system, the Dwarves used a duodecimal system, and the Men of the West in the Third Age used mainly a decimal system. The digits used were as follows:

ρ	τ	α	α	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner
0	1	2	3	4	5	6	7	8	9	10	11	

In all systems the numbers are written with the unit digit at the left. The digits were usually marked, either by a dot over each digit, or by a line drawn above the number, for a decimal system; in a duodecimal system, the dot or line was written below. The mark could be omitted where no confusion would arise. In a duodecimal system, a circle could be used (in place of the dot) to mark the twelves digit; and the symbol ρ or ρ could be used for 12 (though how, it is not clear!).

Examples:

(Italic numbers are used for reversed numbers, roman for normal numbers.)

Decimal: $\dot{\rho}\tau = 01 = 10$; $\dot{\rho}\lrcorner\lrcorner\tau = 091 = 190$
 $\overline{\tau\lrcorner\lrcorner\alpha\lrcorner\lrcorner\lrcorner} = 1780396 = 6930871$

Duodecimal: $\lrcorner\alpha$ or $\lrcorner\alpha$ = $5\ 3_{12} = 3\ 5_{12} = 41$
 $\underline{\rho\alpha\lrcorner\alpha} = 70\ \hat{1}1\ 2\ \hat{1}0\ 3\ 2_{12} = 2\ 3\ \hat{1}0\ 2\ \hat{1}1\ 0\ 7_{12} = 6\ 930\ 871$

The only numerals we have for the runes are three digits found in the Book of Mazarbul in *Pictures* by J. R. R. Tolkien: $\mathfrak{A} = 3$, $\mathfrak{W} = 4$, $\mathfrak{Y} = 5$.