

# The Origin of the Decimal Values of the Hebrew Letters

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As far as I know it has always been taken for granted that the decimal values of *yod* through *taf* (10 through 400) were simply *attributed* to these letters. In my opinion, however, these values were *calculated*: they were achieved by multiplying the sum of the digits of their ordinal values by **10** (*yod* through *tsadeh*) and **100** (*qof* through *taf*).

Alphabet	Ordinal value*	Decimal value
א	1	1
ב	2	2
ג	3	3
ד	4	4
ה	5	5
ו	6	6
ז	7	7
ח	8	8
ט	9	9
י	10	$[1+0=1] \times 10 = 10$
כ	11	$[1+1=2] \times 10 = 20$
ל	12	$[1+2=3] \times 10 = 30$
מ	13	$[1+3=4] \times 10 = 40$
נ	14	$[1+4=5] \times 10 = 50$
ס	15	$[1+5=6] \times 10 = 60$
ע	16	$[1+6=7] \times 10 = 70$
פ	17	$[1+7=8] \times 10 = 80$
צ	18	$[1+8=9] \times 10 = 90$
ק	19	$[1+9=10] \times 10 = 100$
ר	20	$[2+0=2] \times 100 = 200$
ש	21	$[2+1=3] \times 100 = 300$
ת	22	$(2+2=4) \times 100 = 400$

\* Also called Positional value or Place value.

The numbers 500, 600, 700, 800, 900, and 1000 are achieved by the juxtapositions קת, רת, שת, תת, תתק, and תתר respectively:

$$ת=400 + ק=100 = 500.$$

$$ת=400 + ר=200 = 600.$$

$$ת=400 + ש=300 = 700.$$

$$ת=400 + ת=400 = 800.$$

$$ק=100 + ת=400 + ת=400 = 900.$$

$$ר=200 + ת=400 + ת=400 = 1000.$$