

Relationship between Numbers and Letters

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Abstract: This paper proposes that there is a relation between numbers and letters. This relation may exist in all types of different languages. This research focuses on the reason of choosing some mathematical symbols like " \pm " and " π " in Arabic, Latin, and English languages. Also, this paper presents some relations between months, weeks, and days in Arabic, English, and Latin languages.

Key words: Letters and numbers – " π " letter - "ל" letter.

1. Introduction

Throughout the ages people think that there is a tie between letters and numbers. In Hebrew, each letter corresponds to a number. As a result, any word or name can become a series of numbers. Numbers can be taken one at a time or added together. There is significance when words include or add up to the same numbers; the meanings of the words that share numbers are thought to be deeply related or even identical. [1]

Hebrew consists of 22 letters. The first nine letters, *Aleph* through *Tet*, represent the lower part of *Bina*. The next nine, *Yod* through *Tzadik*, stand for *Zeir Anpin*, and the last four, *Kof* through *Tav*, stand for *Malchut*, the creature itself.

In addition to the "regular" letters, there are five final letters in Hebrew. If you look at the illustration in Table 1, you will see that they are not new letters; they bear the same names as letters in the original 22.

Also, Muslims used abjad numerals, abjad numerals are decimal numerical system in which the 28 letters of the Arabic alphabet are assigned numerical values. In the abjad system the first letter of Arabic alphabet; alif (i) is used to represent 1, the second letter ba (\hookrightarrow) is used to be represent by 2 etc...

They represent numbers from 1 to 9999 and this is clear evidence that every single detail have a significant meaning. The numbers in this system is represented by the alphabetic of Arabic letters and so that it was called Abjad numerals and the illustration is shown in Table 2:

There is a very lack of references that describe the relation between letters and numbers. This paper presents a new view to the relation between letters and numbers. It is tried to answer the question: Is the

Table 1 The Hebrew Letters and Their Numeric Values.

X = Aleph	1	" = Yod	10	F = Kof	100
□ = Bet	2	⊃ = Chaf	20	רׄ = Reish	200
ג = Gimel	3	ב Lamed = ל	30	w= Shin	300
7 = Dalet	4	つ = Mem	40	ת = Tav	400
□ = Hey	5	1 = Nun	50		
1 = Vav	6	o = Samech	60		
7 = Zayin	7	ン = Ain	70		
T = Het	8	5 = Peh	80		
೮ = Tet	9	¥ = Tzadik	90		

Final Letters:

T = Final Chaf	20
□ = Final Mem	40
7 = Final Nun	50
7 = Final Peh	80
" = Final Tzadik	90

Table 2 The Arabic and English Letters and Their Numeric Values.

Αĺ	1	Н ъ	8	S س	60	ت T	400
e ب	2	طI	9	o و	70	ن U	500
c ح	3	ی J	10	e ف	80	خ V	600
D 7	4	K 실	20	Y ص	90	Ζż	700
E 🗻	5	L J	30	ق Q	100	Wض	800
F و	6	م M	40	ر R	200	ظ 'I	900
ز G	7	ن N	50	X ش	300	غ 'O	1000

choice of symbols that represents constants done by chance or has certain reasonable idea. The author presents features of letter " \bot " in representing the π -number and the similarity between " \bot " and " π " in Arabic and Latin languages. Also, the features of week days in Arabic and English languages say that there is a relation between letters and numbers.

2. π -number

The constant ratio is considered one of the most important mathematic numbers and constants. Years ago at the earliest of the human civilization, it gained its huge popularity specially with Egyptians, Greeks, Chinese and Indians. We can say that all different types of civilization cared about it. The amazing effect of π -number took place in architecture and calculations of areas and volumes.

The accretion and development of calculating the constant ratio represents the parallel development of the entire mathematic field.[2]

2.1 Features of " \bot "-Letter and π -number

The Arabic letter \bot is the sixteenth letter in the Arabic alphabets.

There are fifteen letters before the Arabic letter "שב" while there are twelve Arabic letters after it.

When the one multiply fifteen by twelve, the result equals one hundred and eighty 15*12 = 180 which represents the number used to convert angle form to another

If we clearly observed the number of dots on the Arabic letters, we find that they are twenty two dots. Moreover, the number of the different-shaped Arabic letters are seven which represent the ratio 22/7.

The symbol " π " is the first letter of the Greek word "περίμετρος", which means the circumference. This symbol was used for the first time in 1706

The letter " π ", in the Greek alphabets, is the sixteenth letter, and the number of the Arabic letter \bot is the sixteenth as well as shown in Table 3.

Is it a chance?

Table 3 Arabic and English letters.

1 أ	ب2	ت3	ث4	ج5
ح5	خخ	82	ذ9	ر1
ز11	س1	ش13	ص14	ض1
ط16	ظ1	ع٤	غغ	ف2
ق2	ك	23J	م2	ن25
هه	27 9	ى2		



3. Features of Week days (ايام الاسبوع) in Arabic and English languages

A week is a time unit equal to seven days. It is the standard time period used for cycles of work days and rest days in most parts of the world, mostly alongside (but not strictly part of) the Gregorian calendar.

The days of the week were named in different languages after classical planets, various deities (example: Thursday – Thor's day, a variation after Jupiter's day from Roman times) and heavenly bodies (example: Sunday – Sun's day) and other sources. In English, the names are Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday.

The term "week" is sometimes expanded to refer to other time units comprising a few days, such as the nominal cycle of the ancient Roman calendar.

4. Methodology

The Arabic letters are ordered as given in Table 3 and each letter has a number from 1 to 28. In English language the letters are ordered a b c,...,y, z and each letter has a number from 1 to 26. The letters that its

capital shape is different from its small shape are chosen as shown in Table 4.

Compute the number representing the day which is the sum of the numbers representing the day as shown in Table 5.

Table 4 Non-shaped letters in English Language.

A	a	1
В	b	2
D	d	4
Е	e	5
G	g	7
Н	h	8
I	Ι	9
J	j	10
M	m	13
N	n	14
Q	q	17
R	r	18
T	t	20

Table 5

اللغه الانجليزيه	اللغه العربيه
SATUR DAY: 1+20+18+4+1=44	سبت: 17=3+2+12=17
SUN DAY: 14+4+1=19	احد : 15=8+6+1
MON DAY: 13+14+1+4 =32	اثنين: 4+1±25+28+25=83
TUES DAY: 20+5+1+4= 30	32= 4+1+23+4 : געני
WEDNES DAY: 5+4+14+5+4+1=33	اربع: 31=18+2+10+1
THURS DAY: 20+8+18+4+1 = 51	خميس : 5 +24+28+24
FRI DAY: 18 +9+4+1 =32	جمعه : 73= 26+18+24+5
Sum =241	المجموع = 322

Add the in

The same rule must be applied to Arabic and english Saturday the word equal 44 when we add 4+4= 8. Sunday the word equal 19 when we add 1+9=10. Monday =32when add3+2=5,

TUES DAY=303+0=3,

WEDNES DAY=33...3+3=6.

THURSDAY = 51...5+1=6.

FRI DAY = 32...3+2=5,

When we add 8+10+5+3+6+6+5=43

The number 34....when add between number 4+3=week

The number 34....when subtraction between number 4-3 =day

The number 34....when multiply between number 4*3=year

Table 6

SATUR DAY	44	4+4	8	8
SUN DAY	19	1+9	10	1
MON DAY	32	3+2	5	5
TUES DAY	30	3+0	3	3
WEDNES DAY	33	3+3	6	6
THURS DAY	51	5+1	6	6
FRI DAY	32	3+2	5	5
Sum	241		43	34
,				

سبت	17	1+7	8	8
احد	15	1+5	6	6
اثنين	83	8+3	11	1+1
ثلاث	32	3+2	5	5
اربع خمیس	31	3+1	4	4
	71	7+1	8	8
جمعه	73	7+3	10	1+0
المجموع	322		52	34

1: and so when we add the results of the Arabic days we will notes that their total is 322 and when we add between the number we will notes that 3+2+2=7 and this is the day of the week

2: we will chose the capital letters which different from its shape in small to count the word when we add the English days the result leads to 241 and when we add between the number 2+4+1=7 and this is the day of the week

References

- [2] Mathematics+and+Its+History+-+%5bMei+%5djohn+Sti llwell 937
- [3] https://www.google.com.eg/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjij6Hx6OrLAhUrA3MKHUbyBK0QFggfMAA&url=https%3A%2F%2Fen.wikipedia.org%2Fwiki%2FWeek&usg=AFQjCNGT1mcVjQvYhmJm5dz0Qf2QgtIQXQ&bvm=bv.118443451,d.bGQ