

Introduction to Gematrical Value and 19

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Abstract

Four systems for numerical value of letters are introduced. Out of them, it seems, the two systems "Gematrical Value" and "Total Gematrical Value" have more endorsements for scrutiny of Koran verses.

A simple way for verifying the divisibility of numbers by 19 is presented.

It seems that use of gematrical value of letters is something beyond a mathematical play or an ordinary way for calculation. To assign numerical value of letters four systems have been introduced for each it is necessary that the sequence of the letters to be in terms of the increase of the letter value.

GV system (or Gematrical Value system):

(ا=1), (ب=2), (ج=3), (د=4), (ه=5), (و=6), (ز=7), (ح=8), (ط=9), (ی=10),
(ک=20), (ل=30), (م=40), (ن=50), (س=60), (ع=70), (ف=80), (ص=90),
(ق=100), (ر=200), (ش=300), (ت=400), (ث=500), (خ=600), (ذ=700),
(ض=800), (ظ=900), (غ=1000)

GSV system (or Gematrical Sequential Value system):

(ا=1), (ب=2), (ج=3), (د=4), (ه=5), (و=6), (ز=7), (ح=8), (ط=9), (ی=10),
(ک=11), (ل=12), (م=13), (ن=14), (س=15), (ع=16), (ف=17), (ص=18),
(ق=19), (ر=20), (ش=21), (ت=22), (ث=23), (خ=24), (ذ=25), (ض=26),
(ظ=27), (غ=28)

ASV system (or Alphabetical Sequential Value system):

(ا=1), (ب=2), (ت=3), (ث=4), (ج=5), (ه=6), (خ=7), (د=8), (ذ=9), (ر=10),
(ز=11), (س=12), (ش=13), (ص=14), (ض=15), (ط=16), (ظ=17), (ع=18),
(غ=19), (ف=20), (ق=21), (ك=22), (ل=23), (م=24), (ن=25), (و=26), (ه=27),
(ى=28)

TGV system (or Total Gematrical value system), which is the sum of the above three systems:

(ا=3), (ب=6), (ج=11), (د=16), (ح=22), (ز=25), (ط=34), (ه=36), (و=39),
(ى=48), (ك=53), (ل=65), (م=77), (س=87), (ن=89), (ع=104), (ف=117),
(ص=122), (ق=140), (ر=230), (ش=334), (ت=425), (ث=527), (خ=631),
(ذ=734), (ض=841), (ظ=944), (غ=1047)

Write GV system continuously from left to right to obtain a multiple of 19:

1234567891020304050607080901002003004005006007008009001000=
19×.... By doing just this act for TGV system you'll obtain yet a multiple of 19.

A way to investigate the divisibility of large numbers by 19 using only a small calculator (when the number is large even for Calculator of your computer):

a) Choose a sufficient small section of your number from left and divide it by 19. Consider only the first two decimal digits of the result as an integer and multiply it by 2 mentally and ignore the first digit from the right of the result. Choose what you obtain and write the next section of the number immediately after it and again divide the result by 19 and Repeat this act until the whole number will be covered. The last above-mentioned integer will be the remainder of the division of the whole number by 19.

b) If you want to have the quotient too, first paper only the integral part of the quotient of the first part, when you got it for the first time. Then consider the number you obtained above mentally, and place the next digit of the main number immediately after it. If the result is 19 or a larger number, you can place more digits of the main number on the right and continue the process. But if the result is less than 19, add a 0 on the

right of the quotient before placing the next digit and continue the process.

For example for 74111097 we can do as in the following: $74 \div 19 = 3.894736842$. The first section of the quotient will be 3. Now we multiply 89 by 2 and ignore the right digit of the result to obtain 17. Now we write 171 which is not smaller than 19 and then we can write say $1711 \div 19 = 90.0526$. The next section of the quotient will be 90. Now we multiply 05 by 2 and ignore the right digit of the result to obtain 1. Now we write 11 which is smaller than 19, so the next section of the quotient will be 0 after which we shall put the next digit (ie 0) yielding 110 which is not smaller than 19, then we can write $11097 \div 19 = 584.0526$. And, in sum, the quotient is 3900584 and the remainder is 1 gotten from doubling 05 and deleting the right digit of the result.

c) If we want to get the remainder of the division of sum of several numbers by 19, it will be sufficient to get the remainder of the 19-division of the sum of the remainders of the 19-division of each of them.