Self-Descriptive Number Names

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If you assign numbers to different letters, you can configure the numbers in a way so that the letters that make up a number add up to that number. I found a solution up to 17 (that also includes 19).

The configuration that works is:
E = 0, F = 2.5, G = 3, H = -0.5, I = 0, L = 4, N = 4.5, O = -3.5, R = -2, S = 0, T = 5.5, U = 7, V = 2.5, W = 0, X = 6, and Z = 5.5.

The only adjustments that can be made are G, H, U, and R. Since the only numbers that G, H, U, and R appear in are eight (G and H), three (H and R), and four (R and U), they can be adjusted.
You can add any number to G, but must subtract that number from H and U and add it to R.

Zero = 5.5 + 0 - 2 - 3.5 = 0
One = -3.5 + 4.5 + 0 = 1
Two = 5.5 - 3.5 + 0 = 2
Three = 5.5 - 0.5 - 2 + 0 + 0 = 3
Four = 2.5 - 3.5 + 7 - 2 = 4
Five = 2.5 + 0 + 2.5 + 0 = 5
Six = 0 + 0 + 6 = 6
Seven = 0 + 0 + 2.5 + 0 + 4.5 = 7
Eight = 0 + 0 + 3 - 0.5 + 5.5 = 8
Nine = 4.5 + 0 + 4.5 + 0 = 9
Ten = 5.5 + 0 + 4.5 = 10
Eleven = 0 + 4 + 0 + 2.5 + 0 + 4.5 = 11
Twelve = 5.5 + 0 + 0 + 4 + 2.5 + 0 = 12
Thirteen = 5.5 - 0.5 + 0 - 2 + 5.5 + 0 + 0 + 4.5 = 13
Fourteen = 2.5 - 3.5 + 7 - 2 + 5.5 + 0 + 0 + 4.5 = 14
Fifteen = 2.5 + 0 + 2.5 + 5.5 + 0 + 0 + 4.5 = 15
Sixteen = 0 + 0 + 6 + 5.5 + 0 + 0 + 4.5 = 16
Seventeen = 0 + 0 + 2.5 + 0 + 4.5 + 5.5 + 0 + 0 + 4.5 = 17
Nineteen = 4.5 + 0 + 4.5 + 0 + 5.5 + 0 + 0 + 4.5 = 19
but
Eighteen = 0 + 0 + 3 - 0.5 + 5.5 + 0 + 0 + 4.5 = 12.5

This is how it's worked out:

Since we know that "teen" has to equal "ten", E has to be equal to 0.
Since "thirteen" = "thir" + "ten" = "three" + "ten", I has to be equal to 2 times E, or 0 also.
Since "nine" has to equal 9, N must be equal to 4.5.
From that we can conclude from "ten", T must equal 5.5.
Then, from "one" we get that O must equal -3.5.
From "fifteen" and "five" we get that F has to equal V and so they both must equal 2.5.
From "eleven" we can get that L is equal to 4.
From "twelve" we can get that W is equal to 0.
Surprisingly, that works with "two" also!

This is why W works with "twelve" and "two":
Eleven is the letters EELV plus E and N, and twelve is the letters EELV plus T and W.
One is the letter O plus E and N, and two is the letters O plus T and W.
Since eleven minus EELV is one minus O and twelve minus EELV is two minus O, the value of W works with both "twelve" and "two"!
From "seven" we can see that S is equal to 0 and then from "six" we can see that X is equal to 6.

Now the only letters that appear in the first 20 numbers (including zero) we're missing are G, H, U, R, and Z. I just decided to set G to be 3 because of the thing that G can be anything, but whatever you add to G you must add to R also and subtract from H and U. That forces H to be -0.5, R to be -2, and U to be 7.

To make "zero", I assigned 5.5 to Z.

You can never make "eighteen" self-descriptive because doing that would make "eight" + "ten" be "eighteen" and therefore T would have to equal E, making T and E both zero. But then N has to equal 10 for "ten" to be self-descriptive, and then "nine" would equal 20, unless you made I -11, which wouldn't work for any of the other numbers.

We could also go further.

We could assign 4.5 to Y to make "twenty" self-descriptive and then therefore make "twenty-one" through "twenty-nine" self-descriptive, but "thirty" would end up equaling 13, since Y is equal to N and therefore equal to EEN and so "thirty" and "thirteen" would be equal.

To make "hundred" self-descriptive, we could make D 45.5, but then "one hundred" would equal 101. So, to make "one hundred" self-descriptive instead, we could make D 45, and therefore make "one hundred" through "one hundred seventeen", and "one hundred nineteen" through "one hundred twenty-nine" self-descriptive.

To make the "one hundred" numbers self descriptive with the "and", like "one hundred and one", we would have to make "and" equal zero, and so A would have to equal -49.5, but that couldn't be, because "thousand".

If we wanted to make "one thousand" self descriptive, we would need A to be 941, and therefore "one thousand" through "one thousand twenty-nine", minus "one thousand eighteen" and "one thousand one hundred" through "one thousand one hundred twenty-nine", minus "one thousand one hundred eighteen" would be self-descriptive.

For "one million" and "one billion" to be self-descriptive, M needs to be 999990 and B needs to be 999999990. We could go on and on like this forever, but if we make all of these changes, the full configuration is:

A = 941, B = 999999990, D = 45, E = 0, F = 2.5, G = 3, H = -0.5, I = 0, L = 4, M = 999990, N = 4.5, O = -3.5, R = -2, S = 0, T = 5.5, U = 7, V = 2.5, W = 0, X = 6, Y = 4.5, and Z = 5.5.

The missing letters are C, J, K, P, and Q,
and the self-descriptive numbers are:

The self-descriptive numbers with this number scheme are:
0-17, 19-29, 100-117, 119-129, 1000-1017, 1019-1029, 1100-1117, 1119-1129, 1000000-1000017, 1000019-1000029, 1000100-1000117, 1000119-1000129, 1001000-1001017, 1001019-1001029, 1001100-1001117, 1001119-1001129, 1000000000-1000000017, 1000000019-1000000029, 1000000100-1000000117, 1000000119-1000000129, 1000001000-1000001017, 1000001019-1000001029, 1000001100-1000001117, 1000001119-1000001129, 1001000000-1001000017, 1001000019-1001000029, 1001000100-1001000117, 1001000119-1001000129, 1001001000-1001001017, 1001001019-1001001029, 1001001100-1001001117, and 1001001119-1001001129.