

# Summation, modulo and decimal

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Hello.

I'm trying to use the modulo (modulus, mod, %) to do the following:

(1) 0,147536 -> (2) 0.101110

The problem is that modulo is only def. to Integers. So, I used the sigma/summation to shift the decimal point to the left (multiply by  $10^k$ ) to get each digit. It not worked because before it shift the digit to the left the number is added to the previous value, so, I used in the formula another "trick"  $(-1)^k$ , so the number stay the same after k even increments. When I try to use it all together the  $(-1)^k$  and the  $10^k$  "cancel each other" and I get the same initial value. What's wrong with my logic?

How can I use the Sum and Mod to turn each number to 1's and 0's giving a number, say, 3,14231243545546 ? I know how to do it using c++ and other languages but I want to make it using only mathematics tools.

Thank you all for the attention,

Spin.

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- *Follow-Ups:*
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