

Re: Comparing two notions of computable number

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1 and 2 are certainly not equivalent. One is related to constructive numbers and one is related to approximable numbers...

More information could be found in many places... for example, some of my papers and my PhD thesis.

check it out at: <http://www.sis.uncc.edu/~yonwang/papers.html>

or <http://www.sis.uncc.edu/~yonwang/research/pastResearch.html>

Axel Boldt <axelboldt@yahoo.com> wrote:

: In http://wikipedia.org/wiki/Computable_number two notions of
: computable number are given:

: 1) a real number a is computable iff there exists a Turing machine
: which for given rational number ϵ produces a rational approximation
: r such that $|a-r| < \epsilon$

: 2) a real number a is computable iff there exists a Turing machine
: which for given natural number n produces the n -th decimal digit of a

: Definition 2 seems to be (equivalent to) Turing's original definition.

: Clearly, every 2-computable number is 1-computable. Is the converse
: also true?

: Thanks,

: Axel