

Re: Rudin and Dedekind cuts

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But surely there is a fundamental difference. To define rationals we can start with the Peano axioms for integers and then define rationals as ordered pairs of integers. The idea of a 'number' is very clear, there is no ambiguity.

Is it really? And exactly what is the DEFINITION of "number"?

With Dedekind cuts, there IS ambiguity.

What ambiguity do you see?

"Number" versus "interval"? What is the definition of each of those?

I appreciate that I can define reals using Cauchy sequences, but I am trying to understand the Dedekind cuts.