Remarks on finitism

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Reflections on the Foundations of Mathematics: Essays in honor of Solomon Feferman, ed. Wilfried Sieg and Richard Sommer and Carolyn Talcott, Urbana, *Association for Symbolic Logic, Lecture Notes in Logic*, Volume 15 (2002), p. 407-16

2 ITÉRER = CRÉATION DE LA RAISON

that the idea of iteration, which is of the essence of the idea of number and, in particular, is the means by which numerical functions are definied and numerical equations are proved, is not found or represented in intuition but is a creature of reason. That we may define a function by primitive recursion on a numerical variable is not a consequence of the representability of numbers in intuition, but rather follows from what we meant by (finite) iteration.

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To be sure, even as we have formulated it, this question [what is finitism?] is not precise; for we have not introduced the expression "finite" as a sharply delimited term, but only as a designation of a methodological guideline which, to be sure, enables us to definitively recognize certain kinds of concept formations and inferences as finitist, certain others as non finitist, but which provides no precise dividing line between those which satisfy the demands of finitist methods and those which do not.