

1077-03-336

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A Proemial Disquisition of Cardinality.

This presentation centers on aspects of the Cardinal Theory of Sets. I begin with some background definitions, lemmas, theorems, corollaries, and examples and then proceed to present my results. I have proven several theorems on the cardinality of sets, which led to some interesting results on cardinality and the arithmetic of transfinite numbers.

The presentation of the proofs I constructed starts with the concept of finite sets, leads to denumerable sets, and focuses on my original proof of the claim that $|\mathbb{N}| = |\mathbb{N}^*| = |\mathbb{Z}| = \aleph_0$. These results led me to investigate the question the existence of a cardinal number greater than \aleph_0 and to my proof of the affirmative.

The talk is organized as follows: I provide basic definitions, lemmas, theorems, and corollaries; I outline several of my arguments; and, that leads to my discovery that there exists a cardinal number β such that $\beta > \aleph_0$.

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