An Anomaly in the set of Complex Numbers

by Jim Rock

Abstract. We exploit some rudimentary facts about the number one: $(-1)(-1) = 1$, $1 = \sqrt{1^2}$, and $1^2 = 1$ to show an anomaly in the set of Complex Numbers.

$$1 = \sqrt{1^2},\ i = \sqrt{-1}$$

Since $1^2 = 1$, we can substitute 1 for 1^2 in $1 = \sqrt{1^2}$ to get $1 = \sqrt{1}$

But $1 = \sqrt{1} = \sqrt{(-1)(-1)} = (\sqrt{-1})(\sqrt{-1}) = (i)(i) = i^2 = -1$

Explore set theory anomalies in https://arxiv.org/abs/1002.4433
Addressing mathematical inconsistency: Cantor and Gödel refuted by J. A. Perez.