

proof by definition that $1+1=2$.

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1 abstract

It has been of by confusion over the proof for the equation $1+1=2$, it has yet been considred a conjecture. Today, I will provide valid mathematical proof, by definition, of such a theorem.

2 proof

the successor of a number n can be represented as $\text{succ}(n)$, where $\text{succ}(x) = x + 1$.

The inverse function $\text{succ}^{-1}(x) = x - 1$

thus,

$$1 + 1 = 2$$

$$1 + \text{succ}(0) = 2$$

$$\text{succ}(1 + 0) = 2 \text{ by definition that } a + \text{succ}(b) = \text{succ}(a + b)$$

$$\text{succ}(1) = 2 \text{ by definition } a + 0 = a$$

$$\text{succ}(1) = 2 \text{ by definition.}$$

3 extending

extensions of the $1+1=2$ theorem could then be made by adding the theorems mentioned $a + \text{succ}(b) = \text{succ}(a + b)$ and $a + 0 = a$ which have been considered by definition.