

Assume the theorem is false. We know the following:

$$(\forall v_0) \text{FUNCTION}(v_0) \wedge \text{FUNCTION}(v_0^{-1}) \implies \text{ONEONE}(v_0)$$

We then substitute 0 for v_0 to obtain

$$\text{FUNCTION}(0) \wedge \text{FUNCTION}(0^{-1}) \implies \text{ONEONE}(0)$$

which together with $0^{-1} = 0$ yields

$$\text{FUNCTION}(0) \wedge \text{FUNCTION}(0) \implies \text{ONEONE}(0)$$

which reduces to

$$\text{FUNCTION}(0) \implies \text{ONEONE}(0)$$

which together with $\text{FUNCTION}(0)$ yields

$$\text{ONEONE}(0)$$

but this contradicts $\neg \text{ONEONE}(0)$.