

t21\_zfrefle1

(TMYq8yN4wET2yPpJ8Korp6EFvTTkRBPLhPZ)

October 27, 2020

Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r2\_ordinal2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((r2\_ordinal2 X0 X1) \Rightarrow (r1\_ordinal1 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1 X0) \wedge (v3\_ordinal1 X1)) \Rightarrow ((r1\_ordinal1 X0 X1) \Leftrightarrow (r1\_tarski X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (3)$$

**Theorem 1**

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((r2\_ordinal2 X0 X1) \wedge (r2\_ordinal2 X1 X0)) \Rightarrow (X0 = X1))$$