

t25\_ordinal3

(TMHz4529zmVB654u4Hpbfi6Lxq28Vi41Yrz)

October 27, 2020

Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k10\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((r1\_ordinal1 X0 (k10\_ordinal2 X0 X1)) \wedge (r1\_ordinal1 X1 (k10\_ordinal2 X0 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1 X0) \wedge (v3\_ordinal1 X1)) \Rightarrow (v3\_ordinal1 (k10\_ordinal2 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((r1\_ordinal1 X0 X1) \Leftrightarrow (\forall X2.(v3\_ordinal1 X2) \Rightarrow ((X2 \in X0) \Rightarrow (X2 \in X1))))) \quad (3)$$

**Theorem 1**

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow (\forall X2.(v3\_ordinal1 X2) \Rightarrow ((X0 \in X1) \Rightarrow ((X0 \in k10\_ordinal2 X1 X2) \wedge (X0 \in k10\_ordinal2 X2 X1)))))$$