

t29\_ordinal4

(TMT3q9YQp9XeS97a2yZWe22HPT3zrK5P1Dt)

October 27, 2020

Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k12\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow ((X0 \neq k1\_xboole\_0) \Rightarrow (k1\_xboole\_0 \in X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (k12\_ordinal2 X0 k1\_xboole\_0 = np\_1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3\_ordinal1 X2) \Rightarrow (((np\_1 \in X0) \wedge (X1 \in X2)) \Rightarrow (k12\_ordinal2 X0 X1 \in \\ & k12\_ordinal2 X0 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Rightarrow (v3\_ordinal1 X0)) \quad (4)$$

**Theorem 1**

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((np\_1 \in X0) \Rightarrow ((X1 = k1\_xboole\_0) \vee (np\_1 \in k12\_ordinal2 X0 X1))))$$