

t38\_ordinal6 (TMR-  
BcGkEUAhZQPL2hL8co2P1GXNC5wjCpLR)

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Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v4\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_ordinal2 : \iota \Rightarrow o$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_ordinal6 : \iota \Rightarrow \iota$  be given. Let  $r1\_abian : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((r1\_ordinal1 X0 X1) \Leftrightarrow (\neg X1 \in X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v1\_ordinal2 X1)))) \Rightarrow (\neg(r1\_abian X0 X1) \wedge (\forall X2.(v3\_ordinal1 X2) \Rightarrow (\neg(X2 \in k9\_xtuple\_0 (k3\_ordinal6 X1)) \wedge (X0 = k1\_funct\_1 (k3\_ordinal6 X1) X2)))))) \quad (2)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v5\_ordinal1 X0))) \Rightarrow (v3\_ordinal1 (k9\_xtuple\_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge (v1\_ordinal2 X0)))) \Rightarrow ((v1\_relat\_1 (k3\_ordinal6 X0)) \wedge ((v1\_funct\_1 (k3\_ordinal6 X0)) \wedge ((v5\_ordinal1 (k3\_ordinal6 X0)) \wedge (v1\_ordinal2 (k3\_ordinal6 X0)))))) \quad (4)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((r1\_ordinal1 X0 X1) \Leftrightarrow (\forall X2.(v3\_ordinal1 X2) \Rightarrow ((X2 \in X0) \Rightarrow (X2 \in X1))))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.((v3\_ordinal1\ X1) \wedge \\ & (v4\_ordinal1\ X1) \wedge (\neg v1\_xboole\_0\ X1))) \Rightarrow (\forall X2.((v1\_relat\_1 \\ & X2) \wedge ((v1\_funct\_1\ X2) \wedge ((v5\_ordinal1\ X2) \wedge (v1\_ordinal2\ X2)))) \Rightarrow \\ & ((r1\_ordinal1\ X1\ (k9\_xtuple\_0\ (k3\_ordinal6\ X2))) \wedge ((r1\_abian \\ & X0\ X2) \wedge (\forall X3.(X3 \in X1) \Rightarrow (k1\_funct\_1\ (k3\_ordinal6\ X2)\ X3 \in X0)))) \Rightarrow \\ & (X1 \in k9\_xtuple\_0\ (k3\_ordinal6\ X2)))) \end{aligned}$$