

t49\_ordinal6 (TM-  
RBb4ZP1qUKcX9WVBAp7haghR1y62hxjSU)

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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  $v3\_ordinal6 : \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k7\_ordinal6 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_abian : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_ordinal6 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (r1\_tarski X1 X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v3\_ordinal6 X1)))) \Rightarrow ((X0 \in k9\_xtuple\_0 (k7\_ordinal6 X1)) \Rightarrow (r1\_tarski X0 (k1\_funct\_1 (k7\_ordinal6 X1) X0))) \quad (2)$$

Assume the following.

$$\forall X0. (v3\_ordinal1 X0) \Rightarrow (\forall X1. (v3\_ordinal1 X1) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 X2) \wedge ((v5\_ordinal1 X2) \wedge (v3\_ordinal6 X2)))) \Rightarrow (((X0 \in k9\_xtuple\_0 X2) \wedge (X1 \in k9\_xtuple\_0 (k7\_ordinal6 X2))) \Rightarrow (r1\_abian (k1\_funct\_1 (k7\_ordinal6 X2) X1) (k1\_funct\_1 X2 X0)))))) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_ordinal6 X0) \Leftrightarrow (\forall X1. (X1 \in X0) \Rightarrow (v3\_ordinal1 X1)) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge (v3\_ordinal6 X0)))) \Rightarrow ((v1\_relat\_1 (k7\_ordinal6 X0)) \wedge ((v1\_funct\_1 (k7\_ordinal6 X0)) \wedge ((v5\_ordinal1 (k7\_ordinal6 X0)) \wedge (v1\_ordinal2 (k7\_ordinal6 X0))))) \quad (6)$$

Assume the following.

$$\forall X0.(v5\_ordinal1 X0) \Leftrightarrow (v3\_ordinal1 (k9\_xtuple\_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.(X1 = k10\_xtuple\_0 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(X3 \in k9\_xtuple\_0 X0) \wedge (X2 = k1\_funct\_1 X0 X3)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((r1\_abian X0 X1) \Leftrightarrow ((X0 \in k9\_xtuple\_0 X1) \wedge (X0 = k1\_funct\_1 X1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (v1\_ordinal6 X0) \quad (10)$$

**Theorem 1**

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge (v1\_ordinal2 X0)))) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v3\_ordinal6 X1)))) \Rightarrow ((X0 \in k10\_xtuple\_0 X1) \Rightarrow (r1\_ordinal1 (k9\_xtuple\_0 (k7\_ordinal6 X1)) (k9\_xtuple\_0 X0))))$$