

# t25\_ordinal5 (TMFYQVbbJS- NDn7En5tUihmHswkWVd6ruNfV)

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Let  $v3\_ordinal1 : \iota \Rightarrow o$  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  $np\_1 : \iota$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_ordinal5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_ordinal2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (v7\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1\_xxreal\_0 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. (v3\_ordinal1 X0) \Rightarrow (\forall X1. (v7\_ordinal1 X1) \Rightarrow (\forall X2. (v7\_ordinal1 X2) \Rightarrow ((np\_1 \in X0) \Rightarrow ((r1\_xxreal\_0 X2 X1) \vee (k1\_ordinal5 X0 X1 \in k1\_ordinal5 X0 X2))))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1\_ordinal1 X2) \Rightarrow (((X0 \in X1) \wedge (X1 \in X2)) \Rightarrow (X0 \in X2)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v3\_ordinal1 X0) \wedge (v3\_ordinal1 X1)) \Rightarrow ((r1\_ordinal1 X0 X1) \Leftrightarrow (r1\_tarski X0 X1)) \quad (6)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (7)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v5\_ordinal1 X0))) \Rightarrow (v3\_ordinal1 (k9\_xtuple\_0 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v5\_ordinal1 X0) \wedge ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 \\ X0) \wedge (v1\_ordinal2 X0)))) \Rightarrow ((v2\_ordinal2 X0) \Leftrightarrow (\forall X1. (v3\_ordinal1 \\ X1) \Rightarrow (\forall X2. (v3\_ordinal1 X2) \Rightarrow (((X1 \in X2) \wedge (X2 \in k9\_xtuple\_0 \\ X0)) \Rightarrow (k1\_funct\_1 X0 X1 \in k1\_funct\_1 X0 X2)))))) \quad (9) \end{aligned}$$

Assume the following.

$$\forall X0. (m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (10)$$

Assume the following.

$$\forall X0. (v3\_ordinal1 X0) \Rightarrow ((v1\_ordinal1 X0) \wedge (v2\_ordinal1 X0)) \quad (11)$$

**Theorem 1**

$$\begin{aligned} \forall X0. (v3\_ordinal1 X0) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge (( \\ v1\_funct\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v1\_ordinal2 X1)))) \Rightarrow (((np\_1 \in \\ X0) \wedge ((r1\_ordinal1 (k9\_xtuple\_0 X1) k4\_ordinal1) \wedge (\forall X2. \\ (v3\_ordinal1 X2) \Rightarrow ((X2 \in k9\_xtuple\_0 X1) \Rightarrow (k1\_funct\_1 X1 X2 = k1\_ordinal5 \\ X0 X2)))))) \Rightarrow (v2\_ordinal2 X1))) \end{aligned}$$