

t23\_ordinal6  
(TMPpr73uYUZ9t9cBXZJJ8ZPz3EqPX1VfUit)

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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  $k2\_ordinal6 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_ordinal6 : \iota \Rightarrow o$  be given. Let  $r3\_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_wellord2 : \iota \Rightarrow \iota$  be given. Let  $k1\_ordinal6 : \iota \Rightarrow \iota$  be given. Let  $k2\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k3\_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_wellord2 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_ordinal6 X0) \Rightarrow (\forall X1.(v1\_ordinal6 X1) \Rightarrow (\forall X2. \\ & ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((r3\_wellord1 (k1\_wellord2 \\ & X0) (k1\_wellord2 X1) X2) \Rightarrow (\forall X3.\forall X4.((X3 \in X0) \wedge (X4 \in \\ & X0)) \Rightarrow ((X3 \in X4) \Leftrightarrow (k1\_funct\_1 X2 X3 \in k1\_funct\_1 X2 X4)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.r3\_wellord1 (k1\_wellord2 (k1\_ordinal6 X0)) (k1\_wellord2 (k2\_ordinal1 X0)) (k2\_ordinal6 X0) \quad (2)$$

Assume the following.

$$\forall X0.(k9\_xtuple\_0 (k2\_ordinal6 X0) = k1\_ordinal6 X0) \wedge (k10\_xtuple\_0 (k2\_ordinal6 X0) = k2\_ordinal1 X0) \quad (3)$$

Assume the following.

$$\forall X0.v1\_ordinal6 (k2\_ordinal1 X0) \quad (4)$$

Assume the following.

$$\forall X0.v3\_ordinal1 (k1\_ordinal6 X0) \quad (5)$$

Assume the following.

$$\forall X0.k2\_ordinal6 X0 = k3\_wellord1 (k1\_wellord2 (k1\_ordinal6 X0)) (k1\_wellord2 (k2\_ordinal1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.k1\_ordinal6 X0 = k2\_wellord2 (k1\_wellord2 (k2\_ordinal1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (v1\_ordinal6 X0) \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1\_relat\_1 X3) \wedge \\ & ((v1\_funct\_1 X3) \wedge (v5\_ordinal1 X3) \wedge (v1\_ordinal2 X3))) \Rightarrow ((( \\ & X3 = k2\_ordinal6 X0) \wedge (X1 \in k9\_xtuple\_0 X3) \wedge (X2 \in k9\_xtuple\_0 X3)) \Rightarrow \\ & ((X1 \in X2) \Leftrightarrow (k1\_funct\_1 X3 X1 \in k1\_funct\_1 X3 X2))) \end{aligned}$$