

## t23\_ordinal1

(TMYPNa5HPTJmsguqgzou2rLqnCha458GpmY)

October 27, 2020

Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1\_xboole\_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

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.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0. (v3\_ordinal1 X0) \Rightarrow (\forall X1. (v3\_ordinal1 X1) \Rightarrow (\neg (\neg X0 \in X1) \wedge ((X0 \neq X1) \wedge (\neg X1 \in X0)))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v3\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Rightarrow (v3\_ordinal1 X0)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k3\_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. (X2 \in X3) \wedge (X3 \in X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (8)$$

Assume the following.

$$\forall X0.(v2\_ordinal1 X0)\Leftrightarrow(\forall X1.\forall X2.\neg(X1 \in X0)\wedge ((X2 \in X0)\wedge(\neg X1 \in X2)\wedge((X1\neq X2)\wedge(\neg X2 \in X1)))) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_ordinal1 X0)\Leftrightarrow(\forall X1.(X1 \in X0)\Rightarrow(r1\_tarSKI X1 X0)) \quad (10)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v3\_ordinal1 X0)\Rightarrow((v1\_ordinal1 X0)\wedge(v2\_ordinal1 X0)) \quad (12)$$

**Theorem 1**

$$\forall X0.(\forall X1.(X1 \in X0)\Rightarrow(v3\_ordinal1 X1))\Rightarrow(v3\_ordinal1 (k3\_tarSKI X0))$$