

## t26\_ordinal5

(TML9UDmupJ9wpBuJLqwwgNo3RbnEqQEKM85)

October 27, 2020

Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_ordinal5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow ((X0 \neq k1\_xboole\_0) \Rightarrow (k1\_xboole\_0 \in X0)) \quad (1)$$

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.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (\forall X2.\neg(X2 \in X1) \wedge (\forall X3.\neg(X3 \in X1) \wedge (X3 \in X2))) \quad (3)$$

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.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow (\forall X2.(v3\_ordinal1 X2) \Rightarrow (((r1\_ordinal1 X0 X1) \wedge (k6\_numbers \in X2)) \Rightarrow (r1\_ordinal1 (k1\_ordinal5 X2 X0) (k1\_ordinal5 X2 X1)))))) \quad (5)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (r1\_ordinal1 (k1\_ordinal1 X0) X1))) \quad (6)$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(k1\_ordinal5\ X0\ np\_1 = X0) \quad (7)$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(\forall X1.(v3\_ordinal1\ X1)\Rightarrow((r1\_ordinal1\ X0\ X1)\vee(X1 \in X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_ordinal1\ X1)\Rightarrow((X0 \in X1)\Rightarrow(v3\_ordinal1\ X0)) \quad (9)$$

Assume the following.

$$k1\_ordinal1\ np\_1 = np\_2 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0)\wedge(v3\_ordinal1\ X1))\Rightarrow((r1\_ordinal1\ X0\ X1)\Leftrightarrow(r1\_tarski\ X0\ X1)) \quad (11)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (12)$$

Assume the following.

$$np\_1 \in np\_2 \quad (13)$$

Assume the following.

$$np\_1 = k1\_ordinal1\ k1\_xboole\_0 \quad (14)$$

Assume the following.

$$np\_1 = k1\_ordinal1\ k1\_xboole\_0 \quad (15)$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0)\wedge(v7\_ordinal1\ X0))\Rightarrow(v7\_ordinal1\ (k1\_ordinal1\ X0)) \quad (16)$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow((\neg v1\_xboole\_0\ (k1\_ordinal1\ X0))\wedge(v3\_ordinal1\ (k1\_ordinal1\ X0))) \quad (17)$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0)\wedge(v3\_ordinal1\ X1))\Rightarrow(v3\_ordinal1\ (k1\_ordinal5\ X0\ X1)) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(v7\_ordinal1 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(v3\_ordinal1 X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(\neg X1 \in X0) \quad (23)$$

**Theorem 1**

$$\forall X0.(v3\_ordinal1 X0)\Rightarrow(\forall X1.(v3\_ordinal1 X1)\Rightarrow((np_{-1} \in X0)\wedge(np_{-1} \in X1))\Rightarrow(X0 \in k1\_ordinal5 X0 X1)))$$