

t15\_card\_lar  
(TMVjooKtM7rkXLfAvCasB4HJDdmiMJz7rjs)

October 27, 2020

Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v4\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_card\_lar : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_card\_lar : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_card\_lar : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. r1\_xboole\_0 (k4\_xboole\_0 X0 X1) X1 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_xboole\_0 X1 X2)) \Rightarrow (r1\_xboole\_0 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v3\_ordinal1 X0) \wedge ((v4\_ordinal1 X0) \wedge (\neg v1\_finset\_1 \\ X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow ((\neg (\neg v1\_card\_lar \\ X1 X0) \wedge (\forall X2. (v3\_ordinal1 X2) \Rightarrow (\neg (X2 \in X0) \wedge (r1\_tarski X1 \\ X2)))) \wedge (\neg (\exists X2. (v3\_ordinal1 X2) \wedge ((X2 \in X0) \wedge (r1\_tarski \\ X1 X2)))) \wedge (v1\_card\_lar X1 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v3\_ordinal1 X0) \wedge ((v4\_ordinal1 X0) \wedge (\neg v1\_finset\_1 \\ X0))) \Rightarrow (\forall X1. (v3\_ordinal1 X1) \Rightarrow ((X1 \in X0) \Rightarrow ((v2\_card\_lar \\ (k6\_subset\_1 X0 X1) X0) \wedge (v1\_card\_lar (k6\_subset\_1 X0 X1) X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_xboole\_0 X0 X1) \Rightarrow (r1\_xboole\_0 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))\Rightarrow(k9\_subset\_1 X0 X1 X2 = k3\_xboole\_0 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k6\_subset\_1 X0 X1 = k4\_xboole\_0 X0 X1 \quad (7)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.m1\_subset\_1 (k6\_subset\_1 X0 X1) (k1\_zfmisc\_1 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_xboole\_0 X0 X1)\Leftrightarrow(k3\_xboole\_0 X0 X1 = k1\_xboole\_0) \quad (10)$$

Assume the following.

$$\begin{aligned} &\forall X0.((v3\_ordinal1 X0)\wedge((v4\_ordinal1 X0)\wedge(\neg v1\_finset\_1 \\ &X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow((v3\_card\_lar \\ &X1 X0)\Leftrightarrow(\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))\Rightarrow(\neg(v2\_card\_lar \\ &X2 X0)\wedge((v1\_card\_lar X2 X0)\wedge(v1\_xboole\_0 (k9\_subset\_1 X0 X1 X2)))))) \end{aligned} \quad (11)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.((v3\_ordinal1 X0)\wedge((v4\_ordinal1 X0)\wedge(\neg v1\_finset\_1 \\ &X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow((v3\_card\_lar \\ &X1 X0)\Rightarrow(v1\_card\_lar X1 X0))) \end{aligned}$$