

l35\_neckla\_3 (TMT-  
fXRcL9ASz58KE6r1XqHeMnob5CaKc1ZS)

October 27, 2020

Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 (k2\_xboole\_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k3\_tarski (k2\_tarski X0 X1) = k2\_xboole\_0 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_finset\_1 X1) \Rightarrow (((\neg r1\_ordinal1 (k1\_card\_1 X0) (k1\_card\_1 X1)) \wedge (\neg k1\_card\_1 X0 \in k1\_card\_1 X1)) \vee (v1\_finset\_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_finset\_1 X0) \Rightarrow (\forall X1. (v1\_finset\_1 X1) \Rightarrow ((r2\_xboole\_0 X0 X1) \Rightarrow ((\neg r1\_xxreal\_0 (k5\_card\_1 X1) (k5\_card\_1 X0)) \wedge (k5\_card\_1 X0 \in k5\_card\_1 X1)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Rightarrow (r1\_ordinal1 (k1\_card\_1 X0) (k1\_card\_1 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (\neg v1\_xboole\_0 X1)) \Rightarrow ((r1\_subset\_1 X0 X1) \Rightarrow (r1\_subset\_1 X1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(\neg v1\_xboole\_0 X1))\Rightarrow ((r1\_subset\_1 X0 X1)\Leftrightarrow(r1\_xboole\_0 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0)\Rightarrow(k5\_card\_1 X0 = k1\_card\_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.\neg(r1\_tarski X0 X1)\wedge (r1\_xboole\_0 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(r2\_xboole\_0 X0 X1)\Leftrightarrow((r1\_tarski X0 X1)\wedge (X0\neq X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski X0 X1 = k2\_tarski X1 X0 \quad (11)$$

**Theorem 1**

$$\forall X0.((\neg v1\_xboole\_0 X0)\wedge(v1\_finset\_1 X0))\Rightarrow(\forall X1. (\neg v1\_xboole\_0 X1)\Rightarrow(\forall X2.(\neg v1\_xboole\_0 X2)\Rightarrow(((X0 = k2\_xboole\_0 X1 X2)\wedge(r1\_subset\_1 X1 X2))\Rightarrow(k1\_card\_1 X1 \in k5\_card\_1 X0))))$$