

t6_arrow (TMHyrE- cEA6UT3viRHXQH5BtNwUZJU3JZt)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_arrow : \iota \Rightarrow \iota$ be given. Let $k3_arrow : \iota \Rightarrow \iota$ be given. Let $r1_arrow : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (2)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\neg v1_xboole_0 (k3_arrow X0)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (m1_subset_1 (k3_arrow X0) (k1_zfmisc_1 (k2_arrow X0))) \quad (5)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. \forall X2. (r1_arrow X0 X1 X2) \Leftrightarrow (k4_tarski X1 X2 \in X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_arrow X0))) \Rightarrow ((X1 = k3_arrow X0) \Leftrightarrow (\forall X2.(m1_subset_1 \\ X2 (k2_arrow X0)) \Rightarrow ((X2 \in X1) \Leftrightarrow (\forall X3.(m1_subset_1 X3 X0) \Rightarrow (\\ \forall X4.(m1_subset_1 X4 X0) \Rightarrow (((k4_tarski X3 X4 \in X2) \wedge (k4_tarski \\ X4 X3 \in X2)) \Rightarrow (X3 = X4)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k2_arrow X0)) \Rightarrow (v1_relat_1 X1)) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3.(m2_subset_1 X3 (\\ k2_arrow X0) (k3_arrow X0)) \Rightarrow (((r1_arrow X3 X1 X2) \wedge (r1_arrow X3 \\ X2 X1)) \Rightarrow (X1 = X2)))))) \end{aligned}$$