

t12_ens_1

(TMXTGZ5BwQkWBJ6aLXD62rKDxfPQ1xzuXQd)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_ens_1 : \iota \Rightarrow \iota$ be given. Let $k3_ens_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ens_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k6_ens_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\ & (k1_domain_1 X0 X1 X2 X3 = k4_tarSKI X2 X3) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. k2_xtuple_0 (k4_tarSKI X0 X1) = X1 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k1_xtuple_0 (k4_tarSKI X0 X1) = X0 \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 \\ & X1 (k2_ens_1 X0)) \wedge (m1_subset_1 X2 (k2_ens_1 X0)))) \Rightarrow (m1_subset_1 \\ & (k6_ens_1 X0 X1 X2) (k2_ens_1 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 (k2_ens_1 X0))) \Rightarrow (m1_subset_1 (k4_ens_1 X0 X1) X0) \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 (k2_ens_1 X0))) \Rightarrow (m1_subset_1 (k3_ens_1 X0 X1) X0) \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k2_ens_1 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k2_ens_1 X0)) \Rightarrow ((k4_ens_1 X0 \\ & X1 = k3_ens_1 X0 X2) \Rightarrow (k6_ens_1 X0 X1 X2 = k4_tarski (k1_domain_1 X0 \\ & X0 (k3_ens_1 X0 X1) (k4_ens_1 X0 X2)) (k3_relat_1 (k2_xtuple_0 X1) \\ & (k2_xtuple_0 X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k2_ens_1 X0)) \Rightarrow (k4_ens_1 X0 X1 = k2_xtuple_0 (k1_xtuple_0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k2_ens_1 X0)) \Rightarrow (k3_ens_1 X0 X1 = k1_xtuple_0 (k1_xtuple_0 X1))) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k2_ens_1 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k2_ens_1 X0)) \Rightarrow ((k3_ens_1 X0 \\ & X1 = k4_ens_1 X0 X2) \Rightarrow ((k2_xtuple_0 (k6_ens_1 X0 X2 X1) = k3_relat_1 \\ & (k2_xtuple_0 X2) (k2_xtuple_0 X1)) \wedge ((k3_ens_1 X0 (k6_ens_1 X0 \\ & X2 X1) = k3_ens_1 X0 X2) \wedge (k4_ens_1 X0 (k6_ens_1 X0 X2 X1) = k4_ens_1 \\ & X0 X1)))))) \end{aligned}$$