

l9_collsp

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $c4_collsp : \iota$ be given. Let $k4_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_collsp : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_collsp : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_collsp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_collsp : \iota \Rightarrow o$ be given. Let $l1_collsp : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $c3_collsp : \iota$ be given. Let $c2_collsp : \iota$ 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.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge ((\neg v1_xboole_0 X2) \wedge \\ & (m1_subset_1 X3 X0) \wedge ((m1_subset_1 X4 X1) \wedge (m1_subset_1 X5 X2)))))) \Rightarrow \\ & (k4_domain_1 X0 X1 X2 X3 X4 X5 = k3_xtuple_0 X3 X4 X5) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_collsp\ X1\ X0)\Rightarrow(\forall X2.\forall X3. (g1_collsp\ X0\ X1 = g1_collsp\ X2\ X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))) \quad (6)$$

Assume the following.

$$(\neg v1_xboole_0\ k4_ordinal1)\wedge(v3_ordinal1\ k4_ordinal1) \quad (7)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0\ (k1_tarski\ X0) \quad (8)$$

Assume the following.

$$\forall X0.\exists X1.m1_subset_1\ X1\ X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_collsp\ X1\ X0)\Rightarrow((v1_collsp\ (g1_collsp\ X0\ X1))\wedge(l1_collsp\ (g1_collsp\ X0\ X1))) \quad (10)$$

Assume the following.

$$(\neg v2_struct_0\ c4_collsp)\wedge(l1_collsp\ c4_collsp) \quad (11)$$

Assume the following.

$$m1_collsp\ c3_collsp\ c2_collsp \quad (12)$$

Assume the following.

$$c4_collsp = g1_collsp\ c2_collsp\ c3_collsp \quad (13)$$

Assume the following.

$$c3_collsp = k1_tarski\ (k4_domain_1\ k5_numbers\ k5_numbers\ k5_numbers\ np_1\ np_1\ np_1) \quad (14)$$

Assume the following.

$$c2_collsp = k6_domain_1\ k5_numbers\ np_1 \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski\ X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow (X2 = X0)) \quad (16)$$

Assume the following.

$$\forall X0.(l1_collsp\ X0)\Rightarrow((v1_collsp\ X0)\Rightarrow(X0 = g1_collsp\ (u1_struct_0\ X0)\ (u1_collsp\ X0))) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 c4_collsp)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 c4_collsp)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 c4_collsp)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & c4_collsp)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 c4_collsp)) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (u1_struct_0 c4_collsp)) \Rightarrow (((\neg(\\ & X0 \neq X1) \wedge ((X0 \neq X2) \wedge (X1 \neq X2))) \Rightarrow (k4_domain_1 (u1_struct_0 c4_collsp) \\ & (u1_struct_0 c4_collsp) (u1_struct_0 c4_collsp) X0 X1 X2 \in u1_collsp \\ & c4_collsp)) \wedge (((k4_domain_1 (u1_struct_0 c4_collsp) (u1_struct_0 \\ & c4_collsp) (u1_struct_0 c4_collsp) X0 X1 X3 \in u1_collsp c4_collsp) \wedge \\ & ((k4_domain_1 (u1_struct_0 c4_collsp) (u1_struct_0 c4_collsp) \\ & (u1_struct_0 c4_collsp) X0 X1 X4 \in u1_collsp c4_collsp) \wedge (k4_domain_1 \\ & (u1_struct_0 c4_collsp) (u1_struct_0 c4_collsp) (u1_struct_0 \\ & c4_collsp) X0 X1 X5 \in u1_collsp c4_collsp)))) \Rightarrow ((X0 = X1) \vee (k4_domain_1 \\ & (u1_struct_0 c4_collsp) (u1_struct_0 c4_collsp) (u1_struct_0 \\ & c4_collsp) X3 X4 X5 \in u1_collsp c4_collsp))))))))) \end{aligned}$$