

t18_incsp_1
(TMTXG9fuc2UQ8eR.J7F4R9sRHCscvhgAfEYZ)

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Let $v15_incsp_1 : \iota \Rightarrow o$ be given. Let $l2_incsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $u2_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r4_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_incsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_incsp_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v7_incsp_1 : \iota \Rightarrow o$ be given. Let $v5_incsp_1 : \iota \Rightarrow o$ be given. Let $v6_incsp_1 : \iota \Rightarrow o$ be given. Let $v8_incsp_1 : \iota \Rightarrow o$ be given. Let $v9_incsp_1 : \iota \Rightarrow o$ be given. Let $v10_incsp_1 : \iota \Rightarrow o$ be given. Let $v11_incsp_1 : \iota \Rightarrow o$ be given. Let $v12_incsp_1 : \iota \Rightarrow o$ be given. Let $v13_incsp_1 : \iota \Rightarrow o$ be given. Let $v14_incsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.k2_enumset1\ X0\ X0\ X1\ X2 = k1_enumset1\ X0\ X1\ X2 \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_incsp_1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u2_incsp_1\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_incsp_1\ X0)) \Rightarrow (\forall X3. \\ (m1_subset_1\ X3\ (u1_incsp_1\ X0)) \Rightarrow (\forall X4.(m1_subset_1\ X4 \\ (u1_incsp_1\ X0)) \Rightarrow ((r4_incsp_1\ X0\ (k8_domain_1\ (u1_incsp_1\ X0) \\ X2\ X3\ X4)\ X1) \Leftrightarrow ((r1_incsp_1\ X0\ X2\ X1) \wedge ((r1_incsp_1\ X0\ X3\ X1) \wedge (r1_incsp_1\ X0\ X4\ X1))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_incsp_1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u2_incsp_1\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_incsp_1\ X0)) \Rightarrow (\forall X3. \\ (m1_subset_1\ X3\ (u1_incsp_1\ X0)) \Rightarrow ((r4_incsp_1\ X0\ (k7_domain_1 \\ (u1_incsp_1\ X0)\ X2\ X3)\ X1) \Leftrightarrow ((r1_incsp_1\ X0\ X2\ X1) \wedge (r1_incsp_1\ X0\ X3\ X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((m1_subset_1 X1 X0)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X0))))\Rightarrow \\ & (k8_domain_1 X0 X1 X2 X3 = k1_enumset1 X1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(l1_incsp_1 X0)\Rightarrow(\neg v1_xboole_0 (u1_incsp_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l2_incsp_1 X0)\Rightarrow(l1_incsp_1 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((m1_subset_1 X1 X0)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X0))))\Rightarrow \\ & (m1_subset_1 (k8_domain_1 X0 X1 X2 X3) (k1_zfmisc_1 X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_incsp_1 X0))))\Rightarrow((v3_incsp_1 X1 X0)\Leftrightarrow(\exists X2.(m1_subset_1 \\ & X2 (u2_incsp_1 X0))\wedge(r4_incsp_1 X0 X1 X2)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0)\Rightarrow((v7_incsp_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 \\ & X1 (u1_incsp_1 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0))\Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u2_incsp_1 X0))\Rightarrow(\forall X4.(m1_subset_1 \\ & X4 (u2_incsp_1 X0))\Rightarrow(((r4_incsp_1 X0 (k7_domain_1 (u1_incsp_1 \\ & X0) X1 X2) X3)\wedge(r4_incsp_1 X0 (k7_domain_1 (u1_incsp_1 X0) X1 X2) \\ & X4))\Rightarrow((X1 = X2)\vee(X3 = X4)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l2_incsp_1 X0)\Rightarrow((v15_incsp_1 X0)\Rightarrow((v5_incsp_1 X0)\wedge \\ & ((v6_incsp_1 X0)\wedge((v7_incsp_1 X0)\wedge((v8_incsp_1 X0)\wedge((v9_incsp_1 \\ & X0)\wedge((v10_incsp_1 X0)\wedge((v11_incsp_1 X0)\wedge((v12_incsp_1 X0)\wedge \\ & ((v13_incsp_1 X0)\wedge(v14_incsp_1 X0)))))))))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v15_incsp_1 X0)\wedge(l2_incsp_1 X0))\Rightarrow(\forall X1.(\\ & m1_subset_1 X1 (u1_incsp_1 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (\\ & u1_incsp_1 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_incsp_1 X0))\Rightarrow \\ & (\forall X4.(m1_subset_1 X4 (u2_incsp_1 X0))\Rightarrow(\neg(X1\neq X2)\wedge((r4_incsp_1 \\ & X0 (k7_domain_1 (u1_incsp_1 X0) X1 X2) X4)\wedge((\neg r1_incsp_1 X0 X3 X4)\wedge \\ & (v3_incsp_1 (k8_domain_1 (u1_incsp_1 X0) X1 X2 X3) X0)))))))))) \end{aligned}$$