

t20_inensp_1

(TMaYaKK24ksj67UcfURkd3aKb5mUhSPXRH7)

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Let $v15_inensp_1 : \iota \Rightarrow o$ be given. Let $l2_inensp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u2_inensp_1 : \iota \Rightarrow \iota$ be given. Let $u4_inensp_1 : \iota \Rightarrow \iota$ be given. Let $r3_inensp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_inensp_1 : \iota \Rightarrow \iota$ be given. Let $r5_inensp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_inensp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_inensp_1 : \iota \Rightarrow o$ be given. Let $r4_inensp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_inensp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_inensp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_inensp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v5_inensp_1 : \iota \Rightarrow o$ be given. Let $v11_inensp_1 : \iota \Rightarrow o$ be given. Let $v6_inensp_1 : \iota \Rightarrow o$ be given. Let $v7_inensp_1 : \iota \Rightarrow o$ be given. Let $v8_inensp_1 : \iota \Rightarrow o$ be given. Let $v9_inensp_1 : \iota \Rightarrow o$ be given. Let $v10_inensp_1 : \iota \Rightarrow o$ be given. Let $v12_inensp_1 : \iota \Rightarrow o$ be given. Let $v13_inensp_1 : \iota \Rightarrow o$ be given. Let $v14_inensp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(l2_inensp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_inensp_1 \\
 & \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_inensp_1 X0)) \Rightarrow (\forall X3. \\
 & \quad (m1_subset_1 X3 (u1_inensp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
 & \quad (u1_inensp_1 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u4_inensp_1 X0)) \Rightarrow \\
 & \quad ((r5_inensp_1 X0 (k9_domain_1 (u1_inensp_1 X0) X1 X2 X3 X4) X5) \Leftrightarrow ((\\
 & \quad r2_inensp_1 X0 X1 X5) \wedge ((r2_inensp_1 X0 X2 X5) \wedge ((r2_inensp_1 X0 X3 X5) \wedge \\
 & \quad (r2_inensp_1 X0 X4 X5))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(l2_inensp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_inensp_1 \\
 & \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_inensp_1 X0)) \Rightarrow (\forall X3. \\
 & \quad (m1_subset_1 X3 (u4_inensp_1 X0)) \Rightarrow ((r5_inensp_1 X0 (k7_domain_1 \\
 & \quad (u1_inensp_1 X0) X1 X2) X3) \Leftrightarrow ((r2_inensp_1 X0 X1 X3) \wedge (r2_inensp_1 X0 \\
 & \quad X2 X3))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_incsp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u2_incsp_1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ (u1_incsp_1 X0)) \Rightarrow ((r4_incsp_1 X0 (k8_domain_1 (u1_incsp_1 X0) \\ X2 X3 X4) X1) \Leftrightarrow ((r1_incsp_1 X0 X2 X1) \wedge ((r1_incsp_1 X0 X3 X1) \wedge (r1_incsp_1 \\ X0 X4 X1)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_incsp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u2_incsp_1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow ((r4_incsp_1 X0 (k7_domain_1 \\ (u1_incsp_1 X0) X2 X3) X1) \Leftrightarrow ((r1_incsp_1 X0 X2 X1) \wedge (r1_incsp_1 X0 \\ X3 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v15_incsp_1 X0) \wedge (l2_incsp_1 X0)) \Rightarrow (\forall X1.(\\ m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (\\ u1_incsp_1 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow \\ (\forall X4.(m1_subset_1 X4 (u1_incsp_1 X0)) \Rightarrow ((v3_incsp_1 (k8_domain_1 \\ (u1_incsp_1 X0) X1 X2 X3) X0) \Rightarrow (v4_incsp_1 (k9_domain_1 (u1_incsp_1 \\ X0) X1 X2 X3 X4) X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 \\ X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k7_domain_1 X0 X1 X2 = k2_tarski X1 \\ X2) \quad (6)$$

Assume the following.

$$\forall X0.(l1_incsp_1 X0) \Rightarrow (\neg v1_xboole_0 (u1_incsp_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l2_incsp_1 X0) \Rightarrow (l1_incsp_1 X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\ X0) \wedge ((m1_subset_1 X1 X0) \wedge ((m1_subset_1 X2 X0) \wedge ((m1_subset_1 \\ X3 X0) \wedge (m1_subset_1 X4 X0)))))) \Rightarrow (m1_subset_1 (k9_domain_1 X0 X1 \\ X2 X3 X4) (k1_zfmisc_1 X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((m1_subset_1 X1 X0)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X0))))\Rightarrow \\ & (m1_subset_1 (k8_domain_1 X0 X1 X2 X3) (k1_zfmisc_1 X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 \\ & X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m1_subset_1 (k7_domain_1 X0 X1 X2) \\ & (k1_zfmisc_1 X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0)\Rightarrow((v5_incsp_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 \\ & X1 (u2_incsp_1 X0))\Rightarrow(\exists X2.(m1_subset_1 X2 (u1_incsp_1 X0))\wedge \\ & (\exists X3.(m1_subset_1 X3 (u1_incsp_1 X0))\wedge((X2\neq X3)\wedge(r4_incsp_1 \\ & X0 (k7_domain_1 (u1_incsp_1 X0) X2 X3) X1)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l2_incsp_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_incsp_1 X0)))\Rightarrow((v4_incsp_1 X1 X0)\Leftrightarrow(\exists X2.(m1_subset_1 \\ & X2 (u4_incsp_1 X0))\wedge(r5_incsp_1 X0 X1 X2)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_incsp_1 X0)))\Rightarrow((v3_incsp_1 X1 X0)\Leftrightarrow(\exists X2.(m1_subset_1 \\ & X2 (u2_incsp_1 X0))\wedge(r4_incsp_1 X0 X1 X2)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l2_incsp_1 X0)\Rightarrow((v11_incsp_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 \\ & X1 (u2_incsp_1 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u4_incsp_1 X0))\Rightarrow \\ & ((\exists X3.(m1_subset_1 X3 (u1_incsp_1 X0))\wedge(\exists X4.(m1_subset_1 \\ & X4 (u1_incsp_1 X0))\wedge((X3\neq X4)\wedge((r4_incsp_1 X0 (k7_domain_1 (u1_incsp_1 \\ & X0) X3 X4) X1)\wedge(r5_incsp_1 X0 (k7_domain_1 (u1_incsp_1 X0) X3 X4) \\ & X2))))))\Rightarrow(r3_incsp_1 X0 X1 X2)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l2_incsp_1 X0)\Rightarrow((v15_incsp_1 X0)\Rightarrow((v5_incsp_1 X0)\wedge \\ & ((v6_incsp_1 X0)\wedge((v7_incsp_1 X0)\wedge((v8_incsp_1 X0)\wedge((v9_incsp_1 \\ & X0)\wedge((v10_incsp_1 X0)\wedge((v11_incsp_1 X0)\wedge((v12_incsp_1 X0)\wedge \\ & ((v13_incsp_1 X0)\wedge(v14_incsp_1 X0)))))))))) \end{aligned} \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v15_incsp_1 X0)\wedge(l2_incsp_1 X0))\Rightarrow(\forall X1.(\\ & m1_subset_1 X1 (u2_incsp_1 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (\\ & u2_incsp_1 X0))\Rightarrow(\neg(\forall X3.(m1_subset_1 X3 (u4_incsp_1 X0))\Rightarrow \\ & (\neg(r3_incsp_1 X0 X1 X3)\wedge(r3_incsp_1 X0 X2 X3)))\wedge(X1 = X2)))) \end{aligned}$$