

t19_incsp_1 (TMGsduBQm- FYAa3B1RBTE7R5oAwWZ2mDQ7R7)

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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 $u4_incsp_1 : \iota \Rightarrow \iota$ 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 $r5_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_incsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_incsp_1 : \iota \Rightarrow o$ be given. Let $v10_incsp_1 : \iota \Rightarrow o$ be given. Let $v5_incsp_1 : \iota \Rightarrow o$ be given. Let $v6_incsp_1 : \iota \Rightarrow o$ be given. Let $v7_incsp_1 : \iota \Rightarrow o$ be given. Let $v8_incsp_1 : \iota \Rightarrow o$ be given. Let $v9_incsp_1 : \iota \Rightarrow o$ be given. Let $v11_incsp_1 : \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0.(l2_incsp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 \\ & \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u4_incsp_1 X0)) \Rightarrow (\forall X3. \\ & \quad (m1_subset_1 X3 (k1_zfmisc_1 (u1_incsp_1 X0))) \Rightarrow (((r5_incsp_1 \\ & \quad X0 X3 X2) \wedge (r2_incsp_1 X0 X1 X2)) \Leftrightarrow (r5_incsp_1 X0 (k4_subset_1 (u1_incsp_1 \\ & \quad X0) X3 (k6_domain_1 (u1_incsp_1 X0) X1)) X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k2_enumset1 X0 X1 X2 X3 = k2_xboole_0 (k1_enumset1 X0 X1 X2) (k1_tarski X3) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\ & \quad X0) \wedge ((m1_subset_1 X1 X0) \wedge ((m1_subset_1 X2 X0) \wedge ((m1_subset_1 \\ & \quad X3 X0) \wedge (m1_subset_1 X4 X0)))))) \Rightarrow (k9_domain_1 X0 X1 X2 X3 X4 = k2_enumset1 \\ & \quad X1 X2 X3 X4) \end{aligned} \quad (3)$$

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.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow \\ & (k6_domain_1 X0 X1 = k1_tarski X1) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(k4_subset_1 X0 X1 X2 = \\ & k2_xboole_0 X1 X2) \end{aligned} \quad (6)$$

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.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow \\ & (m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l2_incsp_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & u1_incsp_1 X0)))\Rightarrow((v4_incsp_1 X1 X0)\Leftrightarrow(\exists X2.(m1_subset_1 \\ & X2 (u4_incsp_1 X0))\wedge(r5_incsp_1 X0 X1 X2))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l2_incsp_1 X0) \Rightarrow ((v10_incsp_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\
& X1 (u1_incsp_1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (u1_incsp_1 X0) \Rightarrow (\forall X4.(m1_subset_1 \\
& X4 (u4_incsp_1 X0) \Rightarrow (\forall X5.(m1_subset_1 X5 (u4_incsp_1 X0) \Rightarrow \\
& (((r5_incsp_1 X0 (k8_domain_1 (u1_incsp_1 X0) X1 X2 X3) X4) \wedge (r5_incsp_1 \\
& X0 (k8_domain_1 (u1_incsp_1 X0) X1 X2 X3) X5)) \Rightarrow ((v3_incsp_1 (k8_domain_1 \\
& (u1_incsp_1 X0) X1 X2 X3) X0) \vee (X4 = X5))))))))))
\end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l2_incsp_1 X0) \Rightarrow ((v15_incsp_1 X0) \Rightarrow ((v5_incsp_1 X0) \wedge \\
& ((v6_incsp_1 X0) \wedge ((v7_incsp_1 X0) \wedge ((v8_incsp_1 X0) \wedge ((v9_incsp_1 \\
& X0) \wedge ((v10_incsp_1 X0) \wedge ((v11_incsp_1 X0) \wedge ((v12_incsp_1 X0) \wedge \\
& ((v13_incsp_1 X0) \wedge (v14_incsp_1 X0))))))))))
\end{aligned} \tag{14}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v15_incsp_1 X0) \wedge (l2_incsp_1 X0)) \Rightarrow (\forall X1.(\\
& m1_subset_1 X1 (u1_incsp_1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (\\
& u1_incsp_1 X0) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_incsp_1 X0) \Rightarrow \\
& (\forall X4.(m1_subset_1 X4 (u1_incsp_1 X0) \Rightarrow (\forall X5.(m1_subset_1 \\
& X5 (u4_incsp_1 X0) \Rightarrow (\neg(\neg v3_incsp_1 (k8_domain_1 (u1_incsp_1 \\
& X0) X1 X2 X3) X0) \wedge (r5_incsp_1 X0 (k8_domain_1 (u1_incsp_1 X0) X1 \\
& X2 X3) X5) \wedge ((\neg r2_incsp_1 X0 X4 X5) \wedge (v4_incsp_1 (k9_domain_1 (u1_incsp_1 \\
& X0) X1 X2 X3 X4) X0))))))))))
\end{aligned}$$