t8_incsp_1 (TMHXuvZWaBo49Kauz8oavpJWYJr8zsXZ278)

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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 $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r4\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_incsp\_1 : \iota \Rightarrow o$ be given. Let $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ (k2\_xboole\_0\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.(l2\_incsp\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_incsp\_1\ X0))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_incsp\_1\ X0))) \Rightarrow (((r1\_tarski\ X2\ X3) \wedge (r4\_incsp\_1\ X0\ X3\ X1)) \Rightarrow (r4\_incsp\_1\ X0\ X2\ X1))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_incsp\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_incsp\_1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_incsp\_1\ X0)) \Rightarrow ((r4\_incsp\_1\ X0\ (k7\_domain\_1\ (u1\_incsp\_1\ X0)\ X2\ X3)\ X1) \Leftrightarrow ((r1\_incsp\_1\ X0\ X2\ X1) \wedge (r1\_incsp\_1\ X0\ X3\ X1)))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X0 \in k2\_xboole\_0\ X2\ (k1\_tarski\ X1)) \Leftrightarrow ((X0 \in X2) \vee (X0 = X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((m1\_subset\_1\ X1\ X0)\wedge(m1\_subset\_1\ X2\ X0)))\Rightarrow(k7\_domain\_1\ X0\ X1\ X2 = k2\_tarski\ X1\ X2) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ X0))\Rightarrow(k6\_domain\_1\ X0\ X1 = k1\_tarski\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k4\_subset\_1\ X0\ X1\ X2 = k2\_xboole\_0\ X1\ X2) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_incsp\_1\ X0)\Rightarrow(\neg v1\_xboole\_0\ (u1\_incsp\_1\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l2\_incsp\_1\ X0)\Rightarrow(l1\_incsp\_1\ X0) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ X0))\Rightarrow(m1\_subset\_1\ (k6\_domain\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(m1\_subset\_1\ (k4\_subset\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ X0)) \tag{12}$$

Assume the following.

$$\forall X0.(l1\_incsp\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_incsp\_1\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0))\Rightarrow((r4\_incsp\_1\ X0\ X1\ X2)\Leftrightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_incsp\_1\ X0))\Rightarrow((X3\in X1)\Rightarrow(r1\_incsp\_1\ X0\ X3\ X2)))))) \tag{13}$$

Theorem 1

$$\forall X0.(l2\_incsp\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_incsp\_1\ X0)))\Rightarrow(((r4\_incsp\_1\ X0\ X3\ X2)\wedge(r1\_incsp\_1\ X0\ X1\ X2))\Leftrightarrow(r4\_incsp\_1\ X0\ (k4\_subset\_1\ (u1\_incsp\_1\ X0)\ X3\ (k6\_domain\_1\ (u1\_incsp\_1\ X0)\ X1))\ X2)))))$$