t3_msafree2 (TMZiBFu-Vakk5SsN6EHmSjWbLikEkzWVc4Pn)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_msualg\_1 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_msafree2 : \iota \Rightarrow \iota$ be given. Let $k3\_msafree2 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v11\_struct\_0 : \iota \Rightarrow o$ be given. Let $l5\_struct\_0 : \iota \Rightarrow o$ be given. Let $u4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_msualg\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_msualg\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_msualg\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ X0\ X1) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \Rightarrow ((X2 \in X0) \Rightarrow ((X1 = k1\_xboole\_0) \vee (k1\_funct\_1\ X3\ X2 \in k2\_relset\_1\ X1\ X3))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{4}$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \tag{5}$$

Assume the following.

$$\forall X0.((\neg v11\_struct\_0\ X0) \wedge (l5\_struct\_0\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (u4\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_msualg\_1\ X0)\Rightarrow((v1\_funct\_1\ (u2\_msualg\_1\ X0))\wedge ((v1\_funct\_2\ (u2\_msualg\_1\ X0)\ (u4\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge (m1\_subset\_1\ (u2\_msualg\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u4\_struct\_0\ X0)\ (u1\_struct\_0\ X0))))))) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_msualg\_1\ X0)\Rightarrow(l5\_struct\_0\ X0) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_msualg\_1\ X0))\Rightarrow(m1\_subset\_1\ (k1\_msafree2\ X0)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2\in X0)\Rightarrow(X2\in X1)) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_msualg\_1\ X0))\Rightarrow(k3\_msafree2\ X0 = k2\_relset\_1\ (u1\_struct\_0\ X0)\ (u2\_msualg\_1\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_msualg\_1\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow((v1\_msualg\_2\ X1\ X0)\Leftrightarrow(\exists X2.(m1\_subset\_1\ X2\ (u4\_struct\_0\ X0))\wedge((k1\_funct\_1\ (u1\_msualg\_1\ X0)\ X2 = k1\_xboole\_0)\wedge(k1\_funct\_1\ (u2\_msualg\_1\ X0)\ X2 = X1))))) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_msualg\_1\ X0))\Rightarrow(((\neg v11\_struct\_0\ X0)\Rightarrow(k1\_msafree2\ X0 = ReplSep\ (toset\ (\lambda X1:\iota.m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\ (\lambda X1:\iota.v1\_msualg\_2\ X1\ X0)\ (\lambda X1:\iota.X1)))\wedge((v11\_struct\_0\ X0)\Rightarrow(k1\_msafree2\ X0 = k1\_xboole\_0))) \tag{13}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_msualg\_1\ X0))\Rightarrow(r1\_tarski\ (k1\_msafree2\ X0)\ (k3\_msafree2\ X0))$$