t5_unialg_2 (TMJJ1XJjGeYe8pYc8RkoAK4nJizcGv1qLJ6)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_unialg\_1 : \iota \Rightarrow o$ be given. Let $v3\_unialg\_1 : \iota \Rightarrow o$ be given. Let $v4\_unialg\_1 : \iota \Rightarrow o$ be given. Let $l1\_unialg\_1 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m5\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_unialg\_2 : \iota \Rightarrow \iota$ be given. Let $r2\_unialg\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k19\_margrel1 : \iota \Rightarrow \iota$ be given. Let $k2\_unialg\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v2\_margrel1 : \iota \Rightarrow o$ be given. Let $v3\_margrel1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $m4\_margrel1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18\_margrel1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow (k9\_xtuple\_0\ (k5\_relat\_1\ X1\ X0) = k3\_xboole\_0\ (k9\_xtuple\_0\ X1)\ X0) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge (\neg v1\_xboole\_0\ X1) \wedge ((v2\_margrel1\ X1) \wedge ((v3\_margrel1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k3\_finseq\_2\ X0)\ X0))))))) \Rightarrow (k9\_xtuple\_0\ X1 = k4\_finseq\_2\ (k19\_margrel1\ X1)\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X1))) \Rightarrow (k3\_xboole\_0\ (k4\_finseq\_2\ X0\ X1)\ (k4\_finseq\_2\ X0\ X2) = k4\_finseq\_2\ X0\ X2))) \tag{3}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\forall X2.\ \forall X3.(\neg v1\_xboole\_0\ X3)\Rightarrow((k4\_finseq\_2\ X0\ X3 = k4\_finseq\_2\ X1\ X2)\Rightarrow(X0 = X1)))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m4\_margrel1\ X1\ X0))\Rightarrow(\forall X2.(m5\_margrel1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow(k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v2\_margrel1\ X0)))\Rightarrow(k19\_margrel1\ X0 = k18\_margrel1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m4\_margrel1\ X1\ X0))\Rightarrow(\forall X2.(m5\_margrel1\ X2\ X0\ X1)\Rightarrow((v1\_funct\_1\ X2)\wedge((\neg v1\_xboole\_0\ X2)\wedge((v2\_margrel1\ X2)\wedge((v3\_margrel1\ X2\ X0)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k3\_finseq\_2\ X0)\ X0)))))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v2\_unialg\_1\ X0)\wedge((v3\_unialg\_1\ X0)\wedge((v4\_unialg\_1\ X0)\wedge(l1\_unialg\_1\ X0)))))\wedge(((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\wedge(m1\_subset\_1\ X2\ (k1\_unialg\_2\ X0))))\Rightarrow((\neg v1\_xboole\_0\ (k2\_unialg\_2\ X0\ X1\ X2))\wedge((v1\_funct\_1\ (k2\_unialg\_2\ X0\ X1\ X2))\wedge((v2\_margrel1\ (k2\_unialg\_2\ X0\ X1\ X2))\wedge((v3\_margrel1\ (k2\_unialg\_2\ X0\ X1\ X2)\ X1)\wedge(m1\_subset\_1\ (k2\_unialg\_2\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k3\_finseq\_2\ X1)\ X1))))))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_unialg\_1\ X0)\wedge((v3\_unialg\_1\ X0)\wedge((v4\_unialg\_1\ X0)\wedge(l1\_unialg\_1\ X0)))))\Rightarrow(m4\_margrel1\ (k1\_unialg\_2\ X0)\ (u1\_struct\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v2\_margrel1\ X0))\Rightarrow(v7\_ordinal1\ (k18\_margrel1\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_unialg\_1\ X0)\wedge((v3\_unialg\_1\ X0)\wedge((v4\_unialg\_1\ X0)\wedge(l1\_unialg\_1\ X0)))))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow(\forall X2.(m5\_margrel1\ X2\ (u1\_struct\_0\ X0)\ (k1\_unialg\_2\ X0))\Rightarrow((r2\_unialg\_2\ X0\ X1\ X2)\Rightarrow(k2\_unialg\_2\ X0\ X1\ X2 = k2\_partfun1\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ X2\ (k4\_finseq\_2\ (k19\_margrel1\ X2)\ X1)))))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_xboole\_0\ X0)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0)))\Rightarrow(v1\_xboole\_0\ X2)) \tag{13}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{15}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_unialg\_1\ X0)\wedge((v3\_unialg\_1\ X0)\wedge((v4\_unialg\_1\ X0)\wedge(l1\_unialg\_1\ X0)))))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow(\forall X2.(m5\_margrel1\ X2\ (u1\_struct\_0\ X0)\ (k1\_unialg\_2\ X0))\Rightarrow((r2\_unialg\_2\ X0\ X1\ X2)\Rightarrow(k19\_margrel1\ (k2\_unialg\_2\ X0\ X1\ X2) = k19\_margrel1\ X2))))$$