t21_polyalg1 (TM-box58DKJJXXhSwwtqLmXvEDqpk27bCQ8m)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l1\_polyalg1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v3\_polyalg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_polyalg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_polyalg1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_polyalg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l3\_algstr\_0\ X0)) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge (l1\_polyalg1\ X1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))) \Rightarrow (\neg (v3\_polyalg1\ X2\ X0\ X1) \wedge (\forall X3.((v1\_polyalg1\ X3\ X0) \wedge (m1\_polyalg1\ X3\ X0\ X1)) \Rightarrow (u1\_struct\_0\ X3 \neq X2))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge (l3\_algstr\_0\ X0)) \wedge (((\neg v2\_struct\_0\ X1) \wedge (l1\_polyalg1\ X1\ X0)) \wedge ((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1)))))) \Rightarrow ((\neg v2\_struct\_0\ (k2\_polyalg1\ X0\ X1\ X2)) \wedge ((v1\_polyalg1\ (k2\_polyalg1\ X0\ X1\ X2)\ X0) \wedge (m1\_polyalg1\ (k2\_polyalg1\ X0\ X1\ X2)\ X0\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l3\_algstr\_0\ X0)) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge (l1\_polyalg1\ X1\ X0)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1)))) \Rightarrow (\forall X3.((\neg v2\_struct\_0\ X3) \wedge ((v1\_polyalg1\ X3\ X0) \wedge (m1\_polyalg1\ X3\ X0\ X1))) \Rightarrow ((X3 = k2\_polyalg1\ X0\ X1\ X2) \Leftrightarrow ((r1\_tarski\ X2\ (u1\_struct\_0\ X3)) \wedge (\forall X4.(m1\_polyalg1\ X4\ X0\ X1) \Rightarrow ((r1\_tarski\ X2\ (u1\_struct\_0\ X4)) \Rightarrow (r1\_tarski\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X4)))))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X0)) \qquad (5)$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l3\_algstr\_0\ X0)) \Rightarrow (\forall X1.\ ((\neg v2\_struct\_0\ X1) \wedge (l1\_polyalg1\ X1\ X0)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1)))) \Rightarrow ((v3\_polyalg1\ X2\ X0\ X1) \Rightarrow (u1\_struct\_0\ (k2\_polyalg1\ X0\ X1\ X2) = X2))))$$