

t14_polyalg1 (TMVPmLF- bPFMR6UBU2TBGpWCjctF3NBdu8f3)

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Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l1_polyalg1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_polyalg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $u3_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_vectsp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_polyalg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 (k2_zfmisc_1 X0 X1) X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1) X1)))))) \Rightarrow (k9_xtuple_0 X2 = k2_zfmisc_1 X0 X1) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 \\ & X0 X1 X2 X3 = k5_relat_1 X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k5_relat_1 X1 X0 = X1) \quad (4)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (k5_relat_1 X0 (k9_xtuple_0 X0) = X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & \forall X6.(((l1_struct_0 X0) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 (k2_zfmisc_1 X1 X1) X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X1 X1) X1)))) \wedge (((v1_funct_1 X3) \wedge ((v1_funct_2 X3 \\ & (k2_zfmisc_1 X1 X1) X1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X1 X1) X1)))) \wedge ((m1_subset_1 X4 X1) \wedge ((m1_subset_1 \\ & X5 X1) \wedge ((v1_funct_1 X6) \wedge ((v1_funct_2 X6 (k2_zfmisc_1 (u1_struct_0 \\ & X0) X1) X1) \wedge (m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) X1) X1)))))))))) \Rightarrow (\forall X7.\forall X8.\forall X9. \\ & \forall X10.\forall X11.\forall X12.\forall X13.(g1_polyalg1 \\ & X0 X1 X2 X3 X4 X5 X6 = g1_polyalg1 X7 X8 X9 X10 X11 X12 X13) \Rightarrow ((X0 = X7) \wedge \\ & ((X1 = X8) \wedge ((X2 = X9) \wedge ((X3 = X10) \wedge ((X4 = X11) \wedge ((X5 = X12) \wedge (X6 = X13)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l3_struct_0 X0) \Rightarrow (m1_subset_1 (u3_struct_0 X0) (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (m1_subset_1 (u2_struct_0 X0) (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l3_algstr_0 X0) \Rightarrow ((v1_funct_1 (u2_algstr_0 X0)) \wedge \\ & ((v1_funct_2 (u2_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 (u2_algstr_0 \\ & X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)) (u1_struct_0 X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((l1_struct_0 X0) \wedge (l1_vectsp_1 X1 X0)) \Rightarrow \\ & ((v1_funct_1 (u1_vectsp_1 X0 X1)) \wedge ((v1_funct_2 (u1_vectsp_1 \\ & X0 X1) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 (u1_vectsp_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)) (u1_struct_0 \\ & X1)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_algstr_0 X0) \Rightarrow & ((v1_funct_1 (u1_algstr_0 X0)) \wedge \\ & ((v1_funct_2 (u1_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 (u1_algstr_0 \\ & X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)) (u1_struct_0 X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_struct_0 X0) \Rightarrow & (\forall X1.(l1_polyalg1 X1 X0) \Rightarrow \\ & ((l6_algstr_0 X1) \wedge (l1_vectsp_1 X1 X0))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(l3_struct_0 X0) \Rightarrow (k5_struct_0 X0 = u3_struct_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (k4_struct_0 X0 = u2_struct_0 X0) \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_struct_0 X0) \Rightarrow & (\forall X1.(l1_polyalg1 X1 X0) \Rightarrow \\ & (\forall X2.(l1_polyalg1 X2 X0) \Rightarrow ((m1_polyalg1 X2 X0 X1) \Leftrightarrow ((r1_tarski \\ & (u1_struct_0 X2) (u1_struct_0 X1)) \wedge ((k5_struct_0 X2 = k5_struct_0 \\ & X1) \wedge ((k4_struct_0 X2 = k4_struct_0 X1) \wedge ((u1_algstr_0 X2 = k1_realset1 \\ & (u1_algstr_0 X1) (u1_struct_0 X2)) \wedge ((u2_algstr_0 X2 = k1_realset1 \\ & (u2_algstr_0 X1) (u1_struct_0 X2)) \wedge (u1_vectsp_1 X0 X2 = k2_partfun1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)) (u1_struct_0 \\ & X1) (u1_vectsp_1 X0 X1) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & X2)))))))))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.k1_realset1 X0 X1 = k5_relat_1 X0 (k2_zfmisc_1 X1 X1)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (22)$$

Theorem 1

$$\begin{aligned} & \forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.(l1_polyalg1 X1 X0) \Rightarrow \\ & (\forall X2.(l1_polyalg1 X2 X0) \Rightarrow ((g1_polyalg1 X0 (u1_struct_0 \\ & X1) (u1_algstr_0 X1) (u2_algstr_0 X1) (u2_struct_0 X1) (u3_struct_0 \\ & X1) (u1_vectsp_1 X0 X1) = g1_polyalg1 X0 (u1_struct_0 X2) (u1_algstr_0 \\ & X2) (u2_algstr_0 X2) (u2_struct_0 X2) (u3_struct_0 X2) (u1_vectsp_1 \\ & X0 X2)) \Rightarrow (m1_polyalg1 X1 X0 X2)))) \end{aligned}$$