

t12_polynom4

(TMF6jvzNHA62ekLq1KxtZffuDVCVqbVNjb)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_algseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_algseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_polynom4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_polynom3 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k8_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k1_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X1 \in X0) \Rightarrow (k1_funct_1 (k2_funcop_1 X0 X2) X1 = X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge \\ & ((v1_algseq_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (u1_struct_0 X0)))))) \Rightarrow ((k1_algseq_1 X0 X1 = k6_numbers) \Rightarrow \\ & (r2_funct_2 k5_numbers (u1_struct_0 X0) X1 (k9_polynom3 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((r2_funct_2 X0 X1 X2 \\ & X3)\Leftrightarrow(X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X2 X0))\Rightarrow(k8_funcop_1 X0 X1 X2 = k2_funcop_1 X1 X2) \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_struct_0 \\ & X0))\wedge(((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers (u1_struct_0 \\ & X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ & X0))))))\wedge(m1_subset_1 X2 k5_numbers)))\Rightarrow(k1_normsp_1 X0 X1 X2 = \\ & k1_funct_1 X1 X2) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l2_struct_0 X0))\Rightarrow((v1_funct_1 (k9_polynom3 X0))\wedge((v1_funct_2 (k9_polynom3 X0) k5_numbers (u1_struct_0 X0))\wedge(v1_algseq_1 (k9_polynom3 X0) X0))) \quad (8)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(l1_struct_0 X0) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l2_struct_0 X0))\Rightarrow((v1_funct_1 \\ & (k9_polynom3 X0))\wedge((v1_funct_2 (k9_polynom3 X0) k5_numbers (\\ & u1_struct_0 X0))\wedge(m1_subset_1 (k9_polynom3 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (m1_subset_1 (k4_struct_0 X0) (u1_struct_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (k9_polynom3 X0 = k8_funcop_1 (u1_struct_0 X0) k5_numbers (k4_struct_0 X0)) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge \\ & ((v1_algseq_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (u1_struct_0 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\ & ((X2 = k1_polynom4 X0 X1) \Leftrightarrow ((k1_normsp_1 X0 X2 (k7_nat_d (k1_algseq_1 \\ & X0 X1) np_1) = k1_normsp_1 X0 X1 (k7_nat_d (k1_algseq_1 X0 X1) np_1)) \wedge \\ & (\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow ((X3 \neq k7_nat_d (k1_algseq_1 \\ & X0 X1) np_1) \Rightarrow (k1_normsp_1 X0 X2 X3 = k4_struct_0 X0)))))) \quad (15) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge \\ & ((v1_algseq_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (u1_struct_0 X0)))))) \Rightarrow ((k1_algseq_1 X0 X1 = k6_numbers) \Rightarrow \\ & (r2_funct_2 k5_numbers (u1_struct_0 X0) (k1_polynom4 X0 X1) (k9_polynom3 \\ & X0)))) \end{aligned}$$