

t42_polynom5
(TMSfz5GWU6jTyTYSMJQ97kWMFKVS1qBEn7g)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_polynom5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_polynom3 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $v1_algseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_algseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_2 : \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_algseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & (l2_struct_0 X1)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 k5_numbers (u1_struct_0 X1)) \wedge ((v1_algseq_1 X2 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X1)))))) \Rightarrow \\ & ((r1_xxreal_0 (k1_algseq_1 X1 X2) X0) \Rightarrow (k1_funct_1 X2 X0 = k4_struct_0 \\ & X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge \\ & ((v1_algseq_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (u1_struct_0 X0)))))) \Rightarrow ((k1_algseq_1 X0 X1 = k6_numbers) \Rightarrow \\ & (r2_funct_2 k5_numbers (u1_struct_0 X0) X1 (k9_polynom3 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (k1_algseq_1 X0 (k9_polynom3 X0) = k6_numbers) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (r1_xxreal_0 (k1_algseq_1 X0 (k4_polynom5 \\ & X0 X1 X2)) np_2))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow ((k3_funct_2 k5_numbers (u1_struct_0 X0) (\\ & k4_polynom5 X0 X1 X2) k6_numbers = X1) \wedge ((k3_funct_2 k5_numbers \\ & (u1_struct_0 X0) (k4_polynom5 X0 X1 X2) np_1 = X2) \wedge (\forall X3. \\ & (v7_ordinal1 X3) \Rightarrow ((r1_xxreal_0 np_2 X3) \Rightarrow (k1_funct_1 (k4_polynom5 \\ & X0 X1 X2) X3 = k4_struct_0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (r1_xxreal_0 k6_numbers X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (8)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xxreal_0 (k1_nat_1 X1 np_1) X0) \Leftrightarrow (r1_xxreal_0 X0 X1))) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ & (l2_struct_0\ X1)) \Rightarrow (\forall X2.((v1_funct_1\ X2) \wedge ((v1_funct_2 \\ & X2\ k5_numbers\ (u1_struct_0\ X1)) \wedge ((v1_algseq_1\ X2\ X1) \wedge (m1_subset_1 \\ & X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X1)))))) \Rightarrow \\ & (\neg(k1_algseq_1\ X1\ X2 = k1_nat_1\ X0\ np_1) \wedge (k1_funct_1\ X2\ X0 = k4_struct_0 \\ & X1)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_2) \wedge (m2_subset_1\ np_2\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_2\ k5_numbers) \wedge (m1_subset_1\ np_2\ k1_numbers)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (13)$$

Assume the following.

$$k2_xcmplx_0\ np_1\ np_1 = np_2 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (r1_xxreal_0\ X0\ X0) \quad (15)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (16)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0\ X0) \wedge \\ & (((v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ X0\ X1) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))))) \wedge (m1_subset_1\ X3\ X0))) \Rightarrow (k3_funct_2\ X0 \\ & X1\ X2\ X3 = k1_funct_1\ X2\ X3) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (m1_subset_1\ X1\ k5_numbers)) \Rightarrow \\ & (k1_nat_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \end{aligned} \quad (19)$$

Assume the following.

$$\exists X0.(v1_xboole_0\ X0) \wedge ((v1_xcmplx_0\ X0) \wedge ((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X0))) \quad (20)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow ((v1_funct_1 (k9_polynom3 X0)) \wedge ((v1_funct_2 (k9_polynom3 X0) k5_numbers (u1_struct_0 X0)) \wedge (v1_algseq_1 (k9_polynom3 X0) X0))) \quad (21)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (22)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((v1_funct_1 (k4_polynom5 X0 X1 X2)) \wedge ((v1_funct_2 (k4_polynom5 X0 X1 X2) k5_numbers (u1_struct_0 X0)) \wedge (v1_algseq_1 (k4_polynom5 X0 X1 X2) X0))) \quad (23)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow ((v1_funct_1 (k9_polynom3 X0)) \wedge ((v1_funct_2 (k9_polynom3 X0) k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 (k9_polynom3 X0) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \quad (24)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (25)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (m1_subset_1 (k4_struct_0 X0) (u1_struct_0 X0)) \quad (26)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((v1_funct_1 (k4_polynom5 X0 X1 X2)) \wedge ((v1_funct_2 (k4_polynom5 X0 X1 X2) k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 (k4_polynom5 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \quad (27)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge ((v1_algseq_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))))) \Rightarrow (m1_subset_1 (k1_algseq_1 X0 X1) k5_numbers) \quad (28)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge \\ ((v1_funct_2 X2 k5_numbers (u1_struct_0 X0)) \wedge ((v1_algseq_1 X2 \\ X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ X0)))))) \Rightarrow ((X2 = k3_algseq_1 X0 X1) \Leftrightarrow ((r1_xxreal_0 (k1_algseq_1 \\ X0 X2) np_1) \wedge (k3_funct_2 k5_numbers (u1_struct_0 X0) X2 k6_numbers = \\ X1)))))) \end{aligned} \quad (29)$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota.v1_xboole_0 X0) \quad (30)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Leftrightarrow (\forall X1. \neg X1 \in X0) \quad (31)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Leftrightarrow (X0 \in k4_ordinal1) \quad (32)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (\\ (r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \end{aligned} \quad (33)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (34)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (v3_membered X0) \quad (35)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (36)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \quad (37)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (38)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (r2_funct_2 \\ k5_numbers (u1_struct_0 X0) (k4_polynom5 X0 (k4_struct_0 X0) (\\ k4_struct_0 X0)) (k9_polynom3 X0)) \end{aligned}$$