

t16_groeb_1 (TMP-
WYx3AaXjVVjsc8EoAWjJXLwdrSDqTKcc)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_pre_poly : \iota \Rightarrow \iota$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ be given. Let $v6_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ 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 $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k11_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_ideal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_polyred : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_polynom7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r7_polyred : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_polyred : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given.

be given. Assume the following.

$$\begin{aligned}
& \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k15_pre_poly\ X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((v8_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (k15_pre_poly\ X0)))))))))) \Rightarrow (\forall X2.((\neg v7_struct_0\ X2) \wedge ((v13_algstr_0\ X2) \wedge (v33_algstr_0\ X2) \wedge ((v3_group_1\ X2) \wedge ((v5_group_1\ X2) \wedge ((v4_vectsp_1\ X2) \wedge ((v5_vectsp_1\ X2) \wedge ((v3_rlvect_1\ X2) \wedge ((v4_rlvect_1\ X2) \wedge (l6_algstr_0\ X2)))))))))) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X3\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2))))))) \Rightarrow (\forall X4.((v1_funct_1\ X4) \wedge ((v1_funct_2\ X4\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X4\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2))))))) \Rightarrow (\forall X5.(m1_subset_1\ X5\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2)))) \Rightarrow (\neg(r1_rewrite1\ (k3_polyred\ X0\ X1\ X2\ X5)\ X3\ X4) \wedge ((X4 \neq X3) \wedge (\forall X6.((v1_funct_1\ X6) \wedge ((v1_funct_2\ X6\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X6\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X6\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)))))))) \Rightarrow (\neg(r5_polyred\ X0\ X1\ X2\ X3\ X6\ X5) \wedge (r1_rewrite1\ (k3_polyred\ X0\ X1\ X2\ X5)\ X6\ X4)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((v3_ordinal1\ X0) \wedge ((\neg v2_struct_0\ X1) \wedge (l2_struct_0\ X1))) \Rightarrow ((v1_funct_1\ (k7_polynom1\ X0\ X1)) \wedge ((v1_funct_2\ (k7_polynom1\ X0\ X1)\ (k15_pre_poly\ X0)\ (u1_struct_0\ X1)) \wedge (v1_polynom1\ (k7_polynom1\ X0\ X1)\ (k15_pre_poly\ X0)\ X1)))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(l6_algstr_0\ X0) \Rightarrow ((l2_algstr_0\ X0) \wedge (l5_algstr_0\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l2_struct_0\ X0) \Rightarrow (l1_struct_0\ X0) \tag{4}$$

Assume the following.

$$\forall X0.(l2_algstr_0\ X0) \Rightarrow ((l2_struct_0\ X0) \wedge (l1_algstr_0\ X0)) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v2_struct_0\ X1) \wedge (l2_struct_0\ X1)) \Rightarrow \\
& ((v1_funct_1\ (k7_polynom1\ X0\ X1)) \wedge ((v1_funct_2\ (k7_polynom1\ X0\ X1)\ (k15_pre_poly\ X0)\ (u1_struct_0\ X1)) \wedge (m1_subset_1\ (k7_polynom1\ X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X1))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k15_pre_poly\ X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((v8_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (k15_pre_poly\ X0)))))))))) \Rightarrow (\forall X2.((\neg v7_struct_0\ X2) \wedge ((v13_algstr_0\ X2) \wedge ((v33_algstr_0\ X2) \wedge ((v3_group_1\ X2) \wedge ((v5_group_1\ X2) \wedge ((v4_vectsp_1\ X2) \wedge ((v5_vectsp_1\ X2) \wedge ((v3_rlvect_1\ X2) \wedge ((v4_rlvect_1\ X2) \wedge (l6_algstr_0\ X2)))))))))) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X3\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2))))))) \Rightarrow (\forall X4.(m1_subset_1\ X4\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2)))) \Rightarrow ((r7_polyred\ X0\ X1\ X2\ X3\ X4) \Leftrightarrow (\exists X5.((v1_funct_1\ X5) \wedge ((v1_funct_2\ X5\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X5\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X5\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2))))))) \wedge (r5_polyred\ X0\ X1\ X2\ X3\ X5\ X4))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v2_struct_0\ X1) \wedge (l2_struct_0\ X1)) \Rightarrow (\forall X2.((v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ (k15_pre_poly\ X0)\ (u1_struct_0\ X1)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X1)))))) \Rightarrow ((v1_polynom7\ X2\ X0\ X1) \Leftrightarrow (X2 \neq k7_polynom1\ X0\ X1))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(l1_struct_0\ X0) \Rightarrow ((v2_struct_0\ X0) \Rightarrow (v7_struct_0\ X0)) \tag{9}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k15_pre_poly \\
& \quad X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((\\
& v8_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly \\
& \quad X0)\ (k15_pre_poly\ X0)))))))))) \Rightarrow (\forall X2.((\neg v7_struct_0\ X2) \wedge \\
& ((v13_algstr_0\ X2) \wedge ((v33_algstr_0\ X2) \wedge ((v3_group_1\ X2) \wedge ((v5_group_1 \\
& \quad X2) \wedge ((v4_vectsp_1\ X2) \wedge ((v5_vectsp_1\ X2) \wedge ((v3_rlvect_1\ X2) \wedge \\
& ((v4_rlvect_1\ X2) \wedge (l6_algstr_0\ X2)))))))))) \Rightarrow (\forall X3.(m1_subset_1 \\
& \quad X3\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2)))) \Rightarrow ((\forall X4. \\
& ((v1_funct_1\ X4) \wedge ((v1_funct_2\ X4\ (k15_pre_poly\ X0)\ (u1_struct_0 \\
& \quad X2)) \wedge ((v1_polynom1\ X4\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X4\ (\\
& \quad k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)))))) \Rightarrow \\
& ((X4 \in k7_ideal_1\ (k11_polynom1\ X0\ X2)\ X3) \Rightarrow (r1_rewrite1\ (k3_polyred \\
& \quad X0\ X1\ X2\ X3)\ X4\ (k7_polynom1\ X0\ X2)))) \Rightarrow (\forall X4.((v1_funct_1 \\
& \quad X4) \wedge ((v1_funct_2\ X4\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom7 \\
& \quad X4\ X0\ X2) \wedge ((v1_polynom1\ X4\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1 \\
& \quad X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)))))) \Rightarrow \\
& ((X4 \in k7_ideal_1\ (k11_polynom1\ X0\ X2)\ X3) \Rightarrow (r7_polyred\ X0\ X1\ X2\ X4 \\
& \quad X3))))))
\end{aligned}$$