

t24_groeb_1

(TMQnbE7uEMYXMRTaMBHfXd7VcLzGjShny8R)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $v2_bagorder : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ 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 $v2_rlvect_1 : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r2_groeb_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $r1_groeb_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_ideal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ 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 $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v9_rewrite1 : \iota \Rightarrow o$ be given. Assume the

following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((v1_partfun1 \\
& X1 (k15_pre_poly X0)) \wedge ((v1_relat_2 X1) \wedge ((v4_relat_2 X1) \wedge ((v6_relat_2 \\
& X1) \wedge ((v8_relat_2 X1) \wedge ((v2_bagorder X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k15_pre_poly X0) (k15_pre_poly X0)))))))))) \Rightarrow (\\
& \forall X2.((\neg v2_struct_0 X2) \wedge ((\neg v6_struct_0 X2) \wedge ((v13_algstr_0 \\
& X2) \wedge ((v33_algstr_0 X2) \wedge ((v3_group_1 X2) \wedge ((v5_group_1 X2) \wedge (\\
& (v4_vectsp_1 X2) \wedge ((v5_vectsp_1 X2) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 \\
& X2) \wedge ((v4_rlvect_1 X2) \wedge (l6_algstr_0 X2)))))))))) \Rightarrow (\forall X3. \\
& ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (k15_pre_poly X0) (u1_struct_0 \\
& X2)) \wedge ((v1_polynom1 X3 (k15_pre_poly X0) X2) \wedge (m1_subset_1 X3 (\\
& k1_zfmisc_1 (k2_zfmisc_1 (k15_pre_poly X0) (u1_struct_0 X2)))))) \Rightarrow \\
& (\forall X4.((\neg v1_xboole_0 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
& (u1_struct_0 (k11_polynom1 X0 X2)))))) \Rightarrow ((r1_groeb_1 X0 X1 X2 X4) \Rightarrow \\
& ((X3 \in k7_ideal_1 (k11_polynom1 X0 X2) X4) \Leftrightarrow (r1_rewrite1 (k3_polyred \\
& X0 X1 X2 X4) X3 (k7_polynom1 X0 X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{2}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{3}$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \tag{4}$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.((v1_partfun1 X1 (k15_pre_poly \\
& X0)) \wedge ((v1_relat_2 X1) \wedge ((v4_relat_2 X1) \wedge ((v6_relat_2 X1) \wedge ((\\
& v8_relat_2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k15_pre_poly \\
& X0) (k15_pre_poly X0)))))))))) \Rightarrow (\forall X2.((\neg v7_struct_0 X2) \wedge \\
& ((v13_algstr_0 X2) \wedge ((v33_algstr_0 X2) \wedge ((v3_group_1 X2) \wedge ((v5_group_1 \\
& X2) \wedge ((v4_vectsp_1 X2) \wedge ((v5_vectsp_1 X2) \wedge ((v3_rlvect_1 X2) \wedge \\
& ((v4_rlvect_1 X2) \wedge (l6_algstr_0 X2)))))))))) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (k1_zfmisc_1 (u1_struct_0 (k11_polynom1 X0 X2)))) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 (k11_polynom1 X0 X2)))) \Rightarrow \\
& ((r2_groeb_1 X0 X1 X2 X3 X4) \Leftrightarrow ((k7_ideal_1 (k11_polynom1 X0 X2) X3 = \\
& X4) \wedge (v9_rewrite1 (k3_polyred X0 X1 X2 X3))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k15_pre_poly\ X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((v8_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (k15_pre_poly\ X0)))))))))) \Rightarrow (\forall X2.((\neg v7_struct_0\ X2) \wedge ((v13_algstr_0\ X2) \wedge ((v33_algstr_0\ X2) \wedge ((v3_group_1\ X2) \wedge ((v5_group_1\ X2) \wedge ((v4_vectsp_1\ X2) \wedge ((v5_vectsp_1\ X2) \wedge ((v3_rlvect_1\ X2) \wedge ((v4_rlvect_1\ X2) \wedge (l6_algstr_0\ X2)))))))))) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2)))) \Rightarrow ((r1_groeb_1\ X0\ X1\ X2\ X3) \Leftrightarrow (v9_rewrite1\ (k3_polyred\ X0\ X1\ X2\ X3))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v3_ordinal1\ X1)) \tag{8}$$

Assume the following.

$$\forall X0.(l4_struct_0\ X0) \Rightarrow ((\neg v6_struct_0\ X0) \Rightarrow (\neg v7_struct_0\ X0)) \tag{9}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1\ X0\ k5_numbers) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k15_pre_poly\ X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((v8_relat_2\ X1) \wedge ((v2_bagorder\ X1\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (k15_pre_poly\ X0)))))))))) \Rightarrow (\\
& \quad \forall X2.((\neg v2_struct_0\ X2) \wedge ((\neg v6_struct_0\ X2) \wedge ((v13_algstr_0\ X2) \wedge ((v33_algstr_0\ X2) \wedge ((v3_group_1\ X2) \wedge ((v5_group_1\ X2) \wedge ((v4_vectsp_1\ X2) \wedge ((v5_vectsp_1\ X2) \wedge ((v2_rlvect_1\ X2) \wedge ((v3_rlvect_1\ X2) \wedge ((v4_rlvect_1\ X2) \wedge (l6_algstr_0\ X2)))))))))) \Rightarrow (\forall X3. \\
& \quad (m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2)))) \Rightarrow (\\
& \quad \quad \forall X4.((\neg v1_xboole_0\ X4) \wedge (m1_subset_1\ X4\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2)))))) \Rightarrow ((r2_groeb_1\ X0\ X1\ X2\ X4\ X3) \Rightarrow (\forall X5.((v1_funct_1\ X5) \wedge ((v1_funct_2\ X5\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X5\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X5\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)))))) \Rightarrow ((X5 \in X3) \Rightarrow (r1_rewrite1\ (k3_polyred\ X0\ X1\ X2\ X4)\ X5\ (k7_polynom1\ X0\ X2))))))
\end{aligned}$$