

t32_groeb_2

(TMVbAXQM21tqGe78SvZi7164y9MWf1wgVP1)

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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 $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k11_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_ideal_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_valued_0 : \iota \Rightarrow o$ be given. Let $v2_pre_poly : \iota \Rightarrow o$ be given. Let $r3_groeb_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_groeb_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_polynom7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_polynom7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_termord : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_termord :$

$\iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\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 ((\\
& \quad 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 v2_struct_0\ X2) \wedge \\
& \quad ((\neg v7_struct_0\ X2) \wedge ((v13_algstr_0\ X2) \wedge ((v4_vectsp_1\ X2) \wedge ((\\
& \quad v5_vectsp_1\ X2) \wedge ((v3_rlvect_1\ X2) \wedge ((v4_rlvect_1\ X2) \wedge (l6_algstr_0 \\
& \quad X2)))))))))) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (k15_pre_poly \\
& \quad X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X3\ (k15_pre_poly\ X0)\ X2) \wedge \\
& \quad (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (\\
& \quad u1_struct_0\ X2)))))) \Rightarrow (\forall X4.((\neg v1_xboole_0\ X4) \wedge (m1_subset_1 \\
& \quad X4\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2)))))) \Rightarrow (\forall X5. \\
& \quad (m2_ideal_1\ X5\ (k11_polynom1\ X0\ X2)\ X4) \Rightarrow (\forall X6.((v1_relat_1 \\
& \quad X6) \wedge ((v4_relat_1\ X6\ X0) \wedge ((v1_funct_1\ X6) \wedge ((v1_partfun1\ X6\ X0) \wedge \\
& \quad ((v4_valued_0\ X6) \wedge (v2_pre_poly\ X6)))))) \Rightarrow ((r3_groeb_2\ X0\ X1\ X2 \\
& \quad X3\ X4\ X5\ X6) \Leftrightarrow ((k4_rlvect_1\ (k11_polynom1\ X0\ X2)\ X5 = X3) \wedge (\forall X7. \\
& \quad (m1_subset_1\ X7\ k5_numbers) \Rightarrow (\neg (X7 \in k4_finseq_1\ X5) \wedge (\forall X8. \\
& \quad ((v1_funct_1\ X8) \wedge ((v1_funct_2\ X8\ (k15_pre_poly\ X0)\ (u1_struct_0 \\
& \quad X2)) \wedge ((v1_polynom7\ X8\ X0\ X2) \wedge ((v3_polynom7\ X8\ X0\ X2) \wedge (m1_subset_1 \\
& \quad X8\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)))))))))) \Rightarrow \\
& \quad (\forall X9.((v1_funct_1\ X9) \wedge ((v1_funct_2\ X9\ (k15_pre_poly\ X0) \\
& \quad (u1_struct_0\ X2)) \wedge ((v1_polynom7\ X9\ X0\ X2) \wedge ((v1_polynom1\ X9\ (k15_pre_poly \\
& \quad X0)\ X2) \wedge (m1_subset_1\ X9\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly \\
& \quad X0)\ (u1_struct_0\ X2)))))))))) \Rightarrow (\neg (X9 \in X4) \wedge ((k7_partfun1\ (u1_struct_0 \\
& \quad (k11_polynom1\ X0\ X2))\ X5\ X7 = k9_polynom1\ X0\ X2\ X8\ X9) \wedge (r1_termord \\
& \quad X0\ X1\ (k3_termord\ X0\ X1\ X2\ (k9_polynom1\ X0\ X2\ X8\ X9))\ X6))))))))))))) \\
& \hspace{15em} (1)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v7_struct_0\ X1) \wedge \\
& ((v13_algstr_0\ X1) \wedge ((v4_vectsp_1\ X1) \wedge ((v5_vectsp_1\ X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1\ X1) \wedge (l6_algstr_0\ X1)))))) \Rightarrow (\forall X2.(\\
& (v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ (k15_pre_poly\ X0)\ (u1_struct_0 \\
& X1)) \wedge ((v1_polynom1\ X2\ (k15_pre_poly\ X0)\ X1) \wedge (m1_subset_1\ X2\ (\\
& k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X1)))))) \Rightarrow \\
& (\forall X3.((\neg v1_xboole_0\ X3) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1 \\
& (u1_struct_0\ (k11_polynom1\ X0\ X1)))))) \Rightarrow (\forall X4.(m2_ideal_1 \\
X4\ (k11_polynom1\ X0\ X1)\ X3) \Rightarrow ((r2_groeb_2\ X0\ X1\ X2\ X3\ X4) \Leftrightarrow ((k4_rlvect_1 \\
& (k11_polynom1\ X0\ X1)\ X4 = X2) \wedge (\forall X5.(m1_subset_1\ X5\ k5_numbers) \Rightarrow \\
& (\neg(X5 \in k4_finseq_1\ X4) \wedge (\forall X6.((v1_funct_1\ X6) \wedge ((v1_funct_2 \\
& X6\ (k15_pre_poly\ X0)\ (u1_struct_0\ X1)) \wedge ((v3_polynom7\ X6\ X0\ X1) \wedge \\
& (m1_subset_1\ X6\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (\\
& u1_struct_0\ X1)))))) \Rightarrow (\forall X7.((v1_funct_1\ X7) \wedge ((v1_funct_2 \\
& X7\ (k15_pre_poly\ X0)\ (u1_struct_0\ X1)) \wedge ((v1_polynom1\ X7\ (k15_pre_poly \\
& X0)\ X1) \wedge (m1_subset_1\ X7\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly \\
& X0)\ (u1_struct_0\ X1)))))) \Rightarrow (\neg(X7 \in X3) \wedge (k7_partfun1\ (u1_struct_0 \\
& (k11_polynom1\ X0\ X1))\ X4\ X5 = k9_polynom1\ X0\ X1\ X6\ X7))))))))) \\
& \hspace{15em} (2)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k15_pre_poly \\
& X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((\\
v8_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly \\
& X0)\ (k15_pre_poly\ X0)))))) \Rightarrow (\forall X2.((\neg v2_struct_0\ X2) \wedge \\
& ((\neg v7_struct_0\ X2) \wedge ((v13_algstr_0\ X2) \wedge ((v4_vectsp_1\ X2) \wedge ((\\
v5_vectsp_1\ X2) \wedge ((v3_rlvect_1\ X2) \wedge ((v4_rlvect_1\ X2) \wedge (l6_algstr_0 \\
& X2)))))) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (k15_pre_poly \\
& X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X3\ (k15_pre_poly\ X0)\ X2) \wedge \\
& (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (\\
& u1_struct_0\ X2)))))) \Rightarrow (\forall X4.((\neg v1_xboole_0\ X4) \wedge (m1_subset_1 \\
& X4\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2)))))) \Rightarrow (\forall X5. \\
& (m2_ideal_1\ X5\ (k11_polynom1\ X0\ X2)\ X4) \Rightarrow (\forall X6.((v1_relat_1 \\
& X6) \wedge ((v4_relat_1\ X6\ X0) \wedge ((v1_funct_1\ X6) \wedge ((v1_partfun1\ X6\ X0) \wedge \\
& ((v4_valued_0\ X6) \wedge (v2_pre_poly\ X6)))))) \Rightarrow ((r3_groeb_2\ X0\ X1\ X2 \\
& X3\ X4\ X5\ X6) \Rightarrow (r2_groeb_2\ X0\ X2\ X3\ X4\ X5))))))
\end{aligned}$$