

t12_groeb_1
(TMXQ58aSqHW3rYeAYrB49cG7nWjFPVPQ67P)

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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 $v9_rewrite1 : \iota \Rightarrow o$ be given. Let $k3_polyred : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_rewrite1 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_rewrite1 : \iota \Rightarrow o$ 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 $k8_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$k5_numbers = k4_ordinal1 \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. v1_relat_1 (k2_zfmisc_1 X0 X1) \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1\ X0)\wedge \\
& (((v1_partfun1\ X1\ (k15_pre_poly\ X0))\wedge((v1_relat_2\ X1)\wedge((v4_relat_2 \\
& X1)\wedge((v6_relat_2\ X1)\wedge((v8_relat_2\ X1)\wedge((v2_bagorder\ X1\ X0)\wedge \\
& (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (\\
& k15_pre_poly\ X0))))))))))\wedge((\neg v2_struct_0\ X2)\wedge((\neg v6_struct_0 \\
& X2)\wedge((v13_algstr_0\ X2)\wedge((v33_algstr_0\ X2)\wedge((v3_group_1\ X2)\wedge \\
& ((v5_group_1\ X2)\wedge((v4_vectsp_1\ X2)\wedge((v5_vectsp_1\ X2)\wedge((v2_rlvect_1 \\
& X2)\wedge((v3_rlvect_1\ X2)\wedge((v4_rlvect_1\ X2)\wedge(l6_algstr_0\ X2))))))))))\wedge \\
& (m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2))))))\Rightarrow \\
& (v3_rewrite1\ (k3_polyred\ X0\ X1\ X2\ X3))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(l6_algstr_0\ X0)\Rightarrow((l2_algstr_0\ X0)\wedge(l5_algstr_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(l5_algstr_0\ X0)\Rightarrow((l4_algstr_0\ X0)\wedge(l4_struct_0\ X0)) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v3_ordinal1\ X0)\wedge \\
& (((v1_partfun1\ X1\ (k15_pre_poly\ X0))\wedge((v1_relat_2\ X1)\wedge((v4_relat_2 \\
& X1)\wedge((v6_relat_2\ X1)\wedge((v8_relat_2\ X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1 \\
& (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (k15_pre_poly\ X0))))))))))\wedge((\\
& (\neg v7_struct_0\ X2)\wedge((v13_algstr_0\ X2)\wedge((v33_algstr_0\ X2)\wedge((\\
& v3_group_1\ X2)\wedge((v5_group_1\ X2)\wedge((v4_vectsp_1\ X2)\wedge((v5_vectsp_1 \\
& X2)\wedge((v3_rlvect_1\ X2)\wedge((v4_rlvect_1\ X2)\wedge(l6_algstr_0\ X2))))))))))\wedge \\
& (m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (k11_polynom1\ X0\ X2))))))\Rightarrow \\
& (m1_subset_1\ (k3_polyred\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\
& (k8_struct_0\ (k11_polynom1\ X0\ X2))\ (u1_struct_0\ (k11_polynom1 \\
& X0\ X2))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \tag{8}$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow \\
(v3_ordinal1\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.(l4_struct_0\ X0)\Rightarrow((\neg v6_struct_0\ X0)\Rightarrow(\neg v7_struct_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_relat_1 X1)) \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v3_rewrite1 X0) \wedge (v9_rewrite1 X0))) \Rightarrow ((v1_relat_1 X0) \wedge (v7_rewrite1 X0)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((v1_partfun1 \\ & X1 (k15_pre_poly X0)) \wedge ((v1_relat_2 X1) \wedge ((v4_relat_2 X1) \wedge ((v6_relat_2 \\ & X1) \wedge ((v8_relat_2 X1) \wedge ((v2_bagorder X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k15_pre_poly X0) (k15_pre_poly X0)))))))))) \Rightarrow (\\ & \forall X2.((-v2_struct_0 X2) \wedge ((-v6_struct_0 X2) \wedge ((v13_algstr_0 \\ & X2) \wedge ((v33_algstr_0 X2) \wedge ((v3_group_1 X2) \wedge ((v5_group_1 X2) \wedge (\\ & (v4_vectsp_1 X2) \wedge ((v5_vectsp_1 X2) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 \\ & X2) \wedge ((v4_rlvect_1 X2) \wedge (l6_algstr_0 X2)))))))))))))) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 (k11_polynom1 X0 X2)))) \Rightarrow \\ & ((v9_rewrite1 (k3_polyred X0 X1 X2 X3)) \Rightarrow (v7_rewrite1 (k3_polyred \\ & X0 X1 X2 X3)))))) \end{aligned}$$