

t50_genealg1
(TMW5gH4aDeoKy5TmHLzjxjofew1ddwemtkJ)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $m1_genealg1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k11_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be

given. Let $k9_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow \\
& (\forall X5.((\neg v1_xboole_0 X5) \wedge ((v1_relat_1 X5) \wedge ((v2_relat_1 \\
& X5) \wedge ((v1_funct_1 X5) \wedge (v1_finseq_1 X5)))))) \Rightarrow (\forall X6.(m1_genealg1 \\
& X6 X5) \Rightarrow (\forall X7.(m1_genealg1 X7 X5) \Rightarrow (((r1_xxreal_0 (k3_finseq_1 \\
& X6) X0) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X1)) \Rightarrow (k11_genealg1 X5 X6 \\
& X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X2 X3 X4)) \wedge (((r1_xxreal_0 (\\
& k3_finseq_1 X6) X0) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X2)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X1 X3 X4)) \wedge (((r1_xxreal_0 \\
& (k3_finseq_1 X6) X0) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X3)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X1 X2 X4)) \wedge (((r1_xxreal_0 \\
& (k3_finseq_1 X6) X0) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X4)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X1 X2 X3)) \wedge (((r1_xxreal_0 \\
& (k3_finseq_1 X6) X1) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X2)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X0 X3 X4)) \wedge (((r1_xxreal_0 \\
& (k3_finseq_1 X6) X1) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X3)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X0 X2 X4)) \wedge (((r1_xxreal_0 \\
& (k3_finseq_1 X6) X1) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X4)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X0 X2 X3)) \wedge (((r1_xxreal_0 \\
& (k3_finseq_1 X6) X2) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X3)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X0 X1 X4)) \wedge (((r1_xxreal_0 \\
& (k3_finseq_1 X6) X2) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X4)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X0 X1 X3)) \wedge (((r1_xxreal_0 \\
& (k3_finseq_1 X6) X3) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X4)) \Rightarrow (k11_genealg1 \\
& X5 X6 X7 X0 X1 X2 X3 X4 = k9_genealg1 X5 X6 X7 X0 X1 X2))))))))))))) \\
& \tag{1}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\
& ((\neg v1_xboole_0 X3) \wedge ((v1_relat_1 X3) \wedge ((v2_relat_1 X3) \wedge ((v1_funct_1 \\
& X3) \wedge (v1_finseq_1 X3)))))) \Rightarrow (\forall X4.(m1_genealg1 X4 X3) \Rightarrow (\forall X5. \\
& (m1_genealg1 X5 X3) \Rightarrow (((r1_xxreal_0 (k3_finseq_1 X4) X0) \wedge (r1_xxreal_0 \\
& (k3_finseq_1 X4) X1) \wedge (r1_xxreal_0 (k3_finseq_1 X4) X2)) \Rightarrow (k9_genealg1 \\
& X3 X4 X5 X0 X1 X2 = X4)))))) \\
& \tag{2}
\end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow \\ & (\forall X5.((\neg v1_xboole_0 X5) \wedge ((v1_relat_1 X5) \wedge ((v2_relat_1 \\ & X5) \wedge ((v1_funct_1 X5) \wedge (v1_finseq_1 X5)))))) \Rightarrow (\forall X6.(m1_genealg1 \\ & X6 X5) \Rightarrow (\forall X7.(m1_genealg1 X7 X5) \Rightarrow (((r1_xxreal_0 (k3_finseq_1 \\ & X6) X0) \wedge ((r1_xxreal_0 (k3_finseq_1 X6) X1) \wedge ((r1_xxreal_0 (k3_finseq_1 \\ & X6) X2) \wedge ((r1_xxreal_0 (k3_finseq_1 X6) X3) \wedge (r1_xxreal_0 (k3_finseq_1 \\ & X6) X4)))))) \Rightarrow (k11_genealg1 X5 X6 X7 X0 X1 X2 X3 X4 = X6)))))))) \end{aligned}$$