

t49_genealg1
(TMLnEqYueV3wczFJ5egUpFxC4JqofaTsu9s)

October 27, 2020

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 $k7_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v1_xboole_0 \\ & X1) \wedge ((v1_relat_1 X1) \wedge ((v2_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ & X1)))))) \Rightarrow (\forall X2.(m1_genealg1 X2 X1) \Rightarrow (\forall X3.(m1_genealg1 \\ & X3 X1) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 X2) X0) \Rightarrow (k7_genealg1 X1 X2 X3 \\ & X0 = X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow \\ & (\forall X5.((\neg v1_xboole_0 X5) \wedge ((v1_relat_1 X5) \wedge ((v2_relat_1 \\ & X5) \wedge ((v1_funct_1 X5) \wedge (v1_finseq_1 X5)))))) \Rightarrow (\forall X6.(m1_genealg1 \\ & X6 X5) \Rightarrow (\forall X7.(m1_genealg1 X7 X5) \Rightarrow (((r1_xxreal_0 (k3_finseq_1 \\ & X6) X0) \Rightarrow (k11_genealg1 X5 X6 X7 X0 X1 X2 X3 X4 = k10_genealg1 X5 X6 X7 \\ & X1 X2 X3 X4)) \wedge (((r1_xxreal_0 (k3_finseq_1 X6) X1) \Rightarrow (k11_genealg1 \\ & X5 X6 X7 X0 X1 X2 X3 X4 = k10_genealg1 X5 X6 X7 X0 X2 X3 X4)) \wedge (((r1_xxreal_0 \\ & (k3_finseq_1 X6) X2) \Rightarrow (k11_genealg1 X5 X6 X7 X0 X1 X2 X3 X4 = k10_genealg1 \\ & X5 X6 X7 X0 X1 X3 X4)) \wedge (((r1_xxreal_0 (k3_finseq_1 X6) X3) \Rightarrow (k11_genealg1 \\ & X5 X6 X7 X0 X1 X2 X3 X4 = k10_genealg1 X5 X6 X7 X0 X1 X2 X4)) \wedge ((r1_xxreal_0 \\ & (k3_finseq_1 X6) X4) \Rightarrow (k11_genealg1 X5 X6 X7 X0 X1 X2 X3 X4 = k10_genealg1 \\ & X5 X6 X7 X0 X1 X2 X3)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.((\neg v1_xboole_0 X4) \wedge \\
& ((v1_relat_1 X4) \wedge ((v2_relat_1 X4) \wedge ((v1_funct_1 X4) \wedge (v1_finseq_1 \\
& X4)))))) \Rightarrow (\forall X5.(m1_genealg1 X5 X4) \Rightarrow (\forall X6.(m1_genealg1 \\
& X6 X4) \Rightarrow (((r1_xxreal_0 (k3_finseq_1 X5) X0) \wedge ((r1_xxreal_0 (k3_finseq_1 \\
& X5) X1) \wedge (r1_xxreal_0 (k3_finseq_1 X5) X2))) \Rightarrow (k10_genealg1 X4 \\
& X5 X6 X0 X1 X2 X3 = k7_genealg1 X4 X5 X6 X3)) \wedge (((r1_xxreal_0 (k3_finseq_1 \\
& X5) X0) \wedge ((r1_xxreal_0 (k3_finseq_1 X5) X1) \wedge (r1_xxreal_0 (k3_finseq_1 \\
& X5) X3))) \Rightarrow (k10_genealg1 X4 X5 X6 X0 X1 X2 X3 = k7_genealg1 X4 X5 X6 X2)) \wedge \\
& (((r1_xxreal_0 (k3_finseq_1 X5) X0) \wedge ((r1_xxreal_0 (k3_finseq_1 \\
& X5) X2) \wedge (r1_xxreal_0 (k3_finseq_1 X5) X3))) \Rightarrow (k10_genealg1 X4 \\
& X5 X6 X0 X1 X2 X3 = k7_genealg1 X4 X5 X6 X1)) \wedge (((r1_xxreal_0 (k3_finseq_1 \\
& X5) X1) \wedge ((r1_xxreal_0 (k3_finseq_1 X5) X2) \wedge (r1_xxreal_0 (k3_finseq_1 \\
& X5) X3))) \Rightarrow (k10_genealg1 X4 X5 X6 X0 X1 X2 X3 = k7_genealg1 X4 X5 X6 X0))))))))) \\
& \tag{3}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow \\
& (\forall X5.((\neg v1_xboole_0 X5) \wedge ((v1_relat_1 X5) \wedge ((v2_relat_1 \\
& X5) \wedge ((v1_funct_1 X5) \wedge (v1_finseq_1 X5)))))) \Rightarrow (\forall X6.(m1_genealg1 \\
& X6 X5) \Rightarrow (\forall X7.(m1_genealg1 X7 X5) \Rightarrow (((r1_xxreal_0 (k3_finseq_1 \\
& X6) X0) \wedge ((r1_xxreal_0 (k3_finseq_1 X6) X1) \wedge ((r1_xxreal_0 (k3_finseq_1 \\
& X6) X2) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X3)))) \Rightarrow (k11_genealg1 X5 \\
& X6 X7 X0 X1 X2 X3 X4 = k7_genealg1 X5 X6 X7 X4)) \wedge (((r1_xxreal_0 (k3_finseq_1 \\
& X6) X0) \wedge ((r1_xxreal_0 (k3_finseq_1 X6) X1) \wedge ((r1_xxreal_0 (k3_finseq_1 \\
& X6) X2) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X4)))) \Rightarrow (k11_genealg1 X5 \\
& X6 X7 X0 X1 X2 X3 X4 = k7_genealg1 X5 X6 X7 X3)) \wedge (((r1_xxreal_0 (k3_finseq_1 \\
& X6) X0) \wedge ((r1_xxreal_0 (k3_finseq_1 X6) X1) \wedge ((r1_xxreal_0 (k3_finseq_1 \\
& X6) X3) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X4)))) \Rightarrow (k11_genealg1 X5 \\
& X6 X7 X0 X1 X2 X3 X4 = k7_genealg1 X5 X6 X7 X2)) \wedge (((r1_xxreal_0 (k3_finseq_1 \\
& X6) X0) \wedge ((r1_xxreal_0 (k3_finseq_1 X6) X2) \wedge ((r1_xxreal_0 (k3_finseq_1 \\
& X6) X3) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X4)))) \Rightarrow (k11_genealg1 X5 \\
& X6 X7 X0 X1 X2 X3 X4 = k7_genealg1 X5 X6 X7 X1)) \wedge (((r1_xxreal_0 (k3_finseq_1 \\
& X6) X1) \wedge ((r1_xxreal_0 (k3_finseq_1 X6) X2) \wedge ((r1_xxreal_0 (k3_finseq_1 \\
& X6) X3) \wedge (r1_xxreal_0 (k3_finseq_1 X6) X4)))) \Rightarrow (k11_genealg1 X5 \\
& X6 X7 X0 X1 X2 X3 X4 = k7_genealg1 X5 X6 X7 X0))))))))) \\
& \tag{3}
\end{aligned}$$