

# t28\_genealg1 (TMKcMdPpe- qfvUQ54fqDBpHkqZksQ4d9AwF9)

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  $k4\_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_card\_3 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 \\ & X1) \wedge ((v1\_relat\_1 X1) \wedge ((v2\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & X1)))))) \Rightarrow (\forall X2.(m1\_genealg1 X2 X1) \Rightarrow (\forall X3.(m1\_genealg1 \\ & X3 X1) \Rightarrow (m1\_genealg1 (k1\_genealg1 X1 X2 X3 X0) X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\forall X3. \\ & ((\neg v1\_xboole\_0 X3) \wedge ((v1\_relat\_1 X3) \wedge ((v2\_relat\_1 X3) \wedge ((v1\_funct\_1 \\ & X3) \wedge (v1\_finseq\_1 X3)))))) \Rightarrow (\forall X4.(m1\_genealg1 X4 X3) \Rightarrow (\forall X5. \\ & (m1\_genealg1 X5 X3) \Rightarrow (m1\_genealg1 (k3\_genealg1 X3 X4 X5 X0 X1 X2) \\ & X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_relat\_1 X0) \wedge ((v2\_relat\_1 \\ & X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0)))))) \Rightarrow (\forall X1.(m1\_genealg1 \\ & X1 X0) \Rightarrow (m2\_finseq\_1 X1 (k3\_card\_3 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_relat\_1 X0) \wedge ((v2\_relat\_1 \\
& X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0)))))) \Rightarrow (\forall X1.(m2\_finseq\_1 \\
& X1 (k3\_card\_3 X0)) \Rightarrow (\forall X2.(m2\_finseq\_1 X2 (k3\_card\_3 X0)) \Rightarrow \\
& (\forall X3.(m1\_subset\_1 X3 k5\_numbers) \Rightarrow (\forall X4.(m1\_subset\_1 \\
& X4 k5\_numbers) \Rightarrow (\forall X5.(m1\_subset\_1 X5 k5\_numbers) \Rightarrow (\forall X6. \\
& (m1\_subset\_1 X6 k5\_numbers) \Rightarrow (k4\_genealg1 X0 X1 X2 X3 X4 X5 X6 = k1\_genealg1 \\
& X0 (k3\_genealg1 X0 X1 X2 X3 X4 X5) (k3\_genealg1 X0 X2 X1 X3 X4 X5) X6))))))))) \\
& \tag{4}
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\
& X1 k5\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\forall X3. \\
& (m1\_subset\_1 X3 k5\_numbers) \Rightarrow (\forall X4.((\neg v1\_xboole\_0 X4) \wedge \\
& ((v1\_relat\_1 X4) \wedge ((v2\_relat\_1 X4) \wedge ((v1\_funct\_1 X4) \wedge (v1\_finseq\_1 \\
& X4)))))) \Rightarrow (\forall X5.(m1\_genealg1 X5 X4) \Rightarrow (\forall X6.(m1\_genealg1 \\
& X6 X4) \Rightarrow (m1\_genealg1 (k4\_genealg1 X4 X5 X6 X0 X1 X2 X3) X4)))))))))
\end{aligned}$$