

t9_freealg (TMZN-
PQEULxG4PmqjbdEDDeyhEouq9Lj3iCi)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_freealg : \iota \Rightarrow o$ be given. Let $k6_unialg_2 : \iota \Rightarrow \iota$ be given. Let $k15_freealg : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v2_unialg_2 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_unialg_1 : \iota \Rightarrow o$ be given. Let $v3_unialg_1 : \iota \Rightarrow o$ be given. Let $v4_unialg_1 : \iota \Rightarrow o$ be given. Let $l1_unialg_1 : \iota \Rightarrow o$ be given. Let $v1_unialg_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v2_relat_1 X0) \wedge (m2_finseq_1 X0 k5_numbers))) \Rightarrow (\forall X1.(v1_freealg X1) \Rightarrow (v2_unialg_2 (k15_freealg X0 X1))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge ((v2_unialg_2 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\neg v1_xboole_0 (k6_unialg_2 X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1_xboole_0 X0) \wedge ((\neg v2_relat_1 X0) \wedge (m1_finseq_1 X0 k5_numbers))) \wedge (v1_freealg X1)) \Rightarrow (((\neg v2_struct_0 (k15_freealg X0 X1)) \wedge ((v1_unialg_1 (k15_freealg X0 X1)) \wedge ((v2_unialg_1 (k15_freealg X0 X1)) \wedge ((v3_unialg_1 (k15_freealg X0 X1)) \wedge ((v4_unialg_1 (k15_freealg X0 X1)) \wedge (l1_unialg_1 (k15_freealg X0 X1)))))))) \quad (5)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v2_relat_1 X0) \wedge (m2_finseq_1 X0 k5_numbers))) \Rightarrow (\forall X1.(v1_freealg X1) \Rightarrow (k6_unialg_2 (k15_freealg X0 X1) \neq k1_xboole_0))$$