

l46_glib_001

(TMPgcbZHKKN4cCZJPvfXhuPUv4ViUYL3iuC)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_glib_000 : \iota \Rightarrow o$ be given. Let $m3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Assume the following.

$$k1_card_1 \ k1_xboole_0 = k1_xboole_0 \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 \ X1) \wedge ((v1_funct_1 \ X1) \wedge (v1_finseq_1 \\ & X1))) \Rightarrow ((X0 \neq k1_xboole_0) \Rightarrow (k2_nat_1 \ (k3_finseq_1 \ (k3_graph_2 \\ & X1 \ X0)) \ np_1 = k2_nat_1 \ (k3_finseq_1 \ X1) \ (k3_finseq_1 \ X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Leftrightarrow (m1_finseq_1 \ X1 \ X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_finseq_1 \ X1 \ X0) \wedge (m1_finseq_1 \ X2 \ X0)) \Rightarrow (k4_graph_2 \ X0 \ X1 \ X2 = k3_graph_2 \ X1 \ X2) \quad (4)$$

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge \\ & ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m3_glib_001 \\ & X1 X0) \Rightarrow ((\neg v1_xboole_0 (k1_card_1 X1)) \wedge ((v1_card_1 (k1_card_1 \\ & X1)) \wedge (\neg v1_abian (k1_card_1 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. (m3_glib_001 \\ & X1 X0) \Rightarrow (m2_finseq_1 X1 (k2_xboole_0 (k6_glib_000 X0) (k7_glib_000 \\ & X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (\\ & (v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. (m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2. (m3_glib_001 X2 X0) \Rightarrow (((k4_glib_001 X0 X1 = k3_glib_001 \\ & X0 X2) \Rightarrow (k7_glib_001 X0 X1 X2 = k4_graph_2 (k2_xboole_0 (k6_glib_000 \\ & X0) (k7_glib_000 X0)) X1 X2)) \wedge ((k4_glib_001 X0 X1 \neq k3_glib_001 \\ & X0 X2) \Rightarrow (k7_glib_001 X0 X1 X2 = X1)))))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. (m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2. (m3_glib_001 X2 X0) \Rightarrow ((k4_glib_001 X0 X1 = k3_glib_001 \\ & X0 X2) \Rightarrow (k2_nat_1 (k3_finseq_1 (k7_glib_001 X0 X1 X2)) \ np_1 = k2_nat_1 \\ & (k3_finseq_1 X1) (k3_finseq_1 X2)))))) \end{aligned}$$