

t17_msscyc_1

(TMVV32XE2eSuJnBEgxPngxPpzTUkcwUWPmC)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_msscyc_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m2_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $u1_graph_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (\neg v11_struct_0 X0) \wedge (l1_graph_1 \\ X0)) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v7_graph_1 X1 X0) \wedge (m1_graph_1 \\ X1 X0))) \Rightarrow (k3_finseq_1 (k7_graph_2 X0 X1) = k2_nat_1 (k3_finseq_1 \\ X1) np_1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ (m2_graph_1 X1 X0) \Leftrightarrow (m1_graph_1 X1 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ (m1_graph_1 X1 X0) \Rightarrow (\forall X2.(m2_finseq_1 X2 (u1_struct_0 X0)) \Rightarrow \\ (((v1_msscyc_1 X1 X0) \wedge (r1_graph_2 X0 X2 X1)) \Rightarrow (k1_funct_1 X2 np_1 = \\ k1_funct_1 X2 (k3_finseq_1 X2)))))) \end{aligned} \tag{3}$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \wedge \\ ((v7_graph_1 X1 X0) \wedge (m1_graph_1 X1 X0))) \Rightarrow (m2_finseq_1 (k7_graph_2 \\ X0 X1) (u1_struct_0 X0)) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\
& ((v7_graph_1 X1 X0) \wedge (m2_graph_1 X1 X0)) \Rightarrow ((X1 \neq k1_xboole_0) \Rightarrow (\\
& \quad \forall X2.(m2_finseq_1 X2 (u1_struct_0 X0)) \Rightarrow ((X2 = k7_graph_2 \\
& X0 X1) \Leftrightarrow ((r1_graph_2 X0 X2 X1) \wedge (k1_funct_1 X2 np_1 = k1_funct_1 \\
& \quad (u1_graph_1 X0) (k1_funct_1 X1 np_1))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_graph_1 \\
& X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v7_graph_1 X1 X0) \wedge (m1_graph_1 \\
& X1 X0))) \Rightarrow ((v1_msscyc_1 X1 X0) \Rightarrow (k1_funct_1 (k7_graph_2 X0 X1) np_1 = \\
& \quad k1_funct_1 (k7_graph_2 X0 X1) (k2_nat_1 (k3_finseq_1 X1) np_1))))
\end{aligned}$$