

t20_rlsb_2

(TMR3kcNsPyNDA4m666LWWprNQihngVneRh2)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $v1_rlvect_1 : \iota \Rightarrow o$ be given. Let $m1_rlsub_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_rlsub_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_rlsub_1 : \iota \Rightarrow \iota$ be given. Let $k1_rlsub_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u1_rlvect_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_rlsub_1 X1 X0) \Rightarrow (\forall X2.(m1_rlsub_1 \\ & X2 X0) \Rightarrow ((m1_rlsub_1 X1 (k1_rlsub_2 X0 X1 X2)) \wedge (m1_rlsub_1 X2 (k1_rlsub_2 \\ & X0 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_rlsub_1 X1 X0) \Rightarrow (\forall X2.((v1_rlvect_1 \\ & X2) \wedge (m1_rlsub_1 X2 X0) \Rightarrow ((m1_rlsub_1 X2 X1) \Leftrightarrow (k2_rlsub_2 X0 X2 \\ & X1 = X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_rlsub_1 X1 X0) \Rightarrow (\forall X2.(m1_rlsub_1 \\ & X2 X0) \Rightarrow (k2_rlsub_2 X0 X1 X2 = k2_rlsub_2 X0 X2 X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))) \Rightarrow (\forall X1.(m1_rlsub_1 X1 X0) \Rightarrow ((k1_rlsub_2 X0 \\
& (k2_rlsub_1 X0) X1 = g1_rlvect_1 (u1_struct_0 X0) (u2_struct_0 \\
& X0) (u1_algstr_0 X0) (u1_rlvect_1 X0)) \wedge (k1_rlsub_2 X0 X1 (k2_rlsub_1 \\
& X0) = g1_rlvect_1 (u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 \\
& X0) (u1_rlvect_1 X0)))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))) \Rightarrow ((v1_rlvect_1 (k2_rlsub_1 X0)) \wedge (m1_rlsub_1 (k2_rlsub_1 \\
& X0) X0))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))) \Rightarrow (k2_rlsub_1 X0 = g1_rlvect_1 (u1_struct_0 X0) (u2_struct_0 \\
& X0) (u1_algstr_0 X0) (u1_rlvect_1 X0))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))) \Rightarrow (\forall X1.((v1_rlvect_1 X1) \wedge (m1_rlsub_1 X1 X0)) \Rightarrow \\
& ((k2_rlsub_2 X0 (k2_rlsub_1 X0) X1 = X1) \wedge (k2_rlsub_2 X0 X1 (k2_rlsub_1 \\
& X0) = X1)))
\end{aligned}$$