

t28_rusub_2

(TMWaQ4SXK6zejEABmBcCaxYswKBRQ5MyyGd)

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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 $v2_bhsp_1 : \iota \Rightarrow o$ be given. Let $l1_bhsp_1 : \iota \Rightarrow o$ be given. Let $m1_rusub_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rusub_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_rusub_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_bhsp_1 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. ((v1_bhsp_1 X1) \wedge (\\ & m1_rusub_1 X1 X0)) \Rightarrow (\forall X2. ((v1_bhsp_1 X2) \wedge (m1_rusub_1 X2 \\ & X0)) \Rightarrow ((u1_struct_0 X1 = u1_struct_0 X2) \Rightarrow (X1 = X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. (m1_rusub_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1_rusub_1 X2 X0) \Rightarrow (\forall X3. (m1_rusub_1 X3 X0) \Rightarrow \\ & ((m1_rusub_1 X1 X2) \Rightarrow (u1_struct_0 (k1_rusub_2 X0 X2 (k2_rusub_2 \\ & X0 X1 X3)) = u1_struct_0 (k2_rusub_2 X0 (k1_rusub_2 X0 X1 X2) (k1_rusub_2 \\ & X0 X2 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 \\
& X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\
& ((v5_rlvect_1 X0)\wedge((v6_rlvect_1 X0)\wedge((v7_rlvect_1 X0)\wedge((v8_rlvect_1 \\
& X0)\wedge((v2_bhsp_1 X0)\wedge(l1_bhsp_1 X0))))))))))\wedge((m1_rusub_1 \\
& X1 X0)\wedge(m1_rusub_1 X2 X0)))\Rightarrow((v1_bhsp_1 (k2_rusub_2 X0 X1 X2))\wedge \\
& (m1_rusub_1 (k2_rusub_2 X0 X1 X2) X0))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 \\
& X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\
& ((v5_rlvect_1 X0)\wedge((v6_rlvect_1 X0)\wedge((v7_rlvect_1 X0)\wedge((v8_rlvect_1 \\
& X0)\wedge((v2_bhsp_1 X0)\wedge(l1_bhsp_1 X0))))))))))\wedge((m1_rusub_1 \\
& X1 X0)\wedge(m1_rusub_1 X2 X0)))\Rightarrow((v1_bhsp_1 (k1_rusub_2 X0 X1 X2))\wedge \\
& (m1_rusub_1 (k1_rusub_2 X0 X1 X2) X0))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 \\
& X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v5_rlvect_1 X0)\wedge \\
& ((v6_rlvect_1 X0)\wedge((v7_rlvect_1 X0)\wedge((v8_rlvect_1 X0)\wedge((v2_bhsp_1 \\
& X0)\wedge(l1_bhsp_1 X0))))))))))\Rightarrow(\forall X1.(m1_rusub_1 X1 X0)\Rightarrow \\
& (\forall X2.(m1_rusub_1 X2 X0)\Rightarrow(\forall X3.(m1_rusub_1 X3 X0)\Rightarrow \\
& ((m1_rusub_1 X1 X2)\Rightarrow(k1_rusub_2 X0 X2 (k2_rusub_2 X0 X1 X3) = k2_rusub_2 \\
& X0 (k1_rusub_2 X0 X1 X2) (k1_rusub_2 X0 X2 X3))))))
\end{aligned}$$