

## t7\_rusub\_2

(TMQBRZm2pZ7T6aB15QEa7frvpo1L9vG9XiF)

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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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_bhsp\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v2\_bhsp\_1 \\ & X0) \wedge (l1\_bhsp\_1 X0)))))))))) \Rightarrow (\forall X1. (m1\_rusub\_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1\_rusub\_1 X2 X0) \Rightarrow ((r1\_tarski (u1\_struct\_0 X1) ( \\ & u1\_struct\_0 X2)) \Rightarrow (m1\_rusub\_1 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v2\_bhsp\_1 \\ & X0) \wedge (l1\_bhsp\_1 X0)))))))))) \Rightarrow (\forall X1. (m1\_rusub\_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1\_rusub\_1 X2 X0) \Rightarrow (r1\_tarski (u1\_struct\_0 X1) (u1\_struct\_0 \\ & (k1\_rusub\_2 X0 X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v2\_bhsp\_1 \\ & X0) \wedge (l1\_bhsp\_1 X0)))))))))) \Rightarrow (\forall X1. (m1\_rusub\_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1\_rusub\_1 X2 X0) \Rightarrow (k1\_rusub\_2 X0 X1 X2 = k1\_rusub\_2 \\ & X0 X2 X1))) \end{aligned} \quad (3)$$

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**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0)\wedge(v13\_algstr\_0 X0)\wedge(v2\_rlvect\_1 \\
& X0)\wedge(v3\_rlvect\_1 X0)\wedge(v4\_rlvect\_1 X0)\wedge(v5\_rlvect\_1 X0)\wedge \\
& ((v6\_rlvect\_1 X0)\wedge(v7\_rlvect\_1 X0)\wedge(v8\_rlvect\_1 X0)\wedge(v2\_bhsp\_1 \\
& X0)\wedge(l1\_bhsp\_1 X0))))))\Rightarrow(\forall X1.(m1\_rusub\_1 X1 X0)\Rightarrow \\
& (\forall X2.(m1\_rusub\_1 X2 X0)\Rightarrow((m1\_rusub\_1 X1 (k1\_rusub\_2 X0 \\
& X1 X2))\wedge(m1\_rusub\_1 X2 (k1\_rusub\_2 X0 X1 X2))))
\end{aligned}$$