t57_rusub_2 (TM-beCgxiKo4kMD39oBJw6oHDLUC4XK1UjA5)

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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 $g3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_rusub\_2 : \iota \Rightarrow \iota$ be given. Let $k5\_rusub\_2 : \iota \Rightarrow \iota$ be given. Let $k6\_rusub\_2 : \iota \Rightarrow \iota$ be given. Let $v10\_lattices : \iota \Rightarrow o$ be given. Let $v15\_lattices : \iota \Rightarrow o$ be given. Let $l3\_lattices : \iota \Rightarrow o$ be given. Let $v14\_lattices : \iota \Rightarrow o$ be given. Let $v13\_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v5\_rlvect\_1\ X0) \wedge ((v6\_rlvect\_1\ X0) \wedge ((v7\_rlvect\_1\ X0) \wedge ((v8\_rlvect\_1\ X0) \wedge ((v2\_bhsp\_1\ X0) \wedge (l1\_bhsp\_1\ X0))))))))))) \Rightarrow (v14\_lattices\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v5\_rlvect\_1\ X0) \wedge ((v6\_rlvect\_1\ X0) \wedge ((v7\_rlvect\_1\ X0) \wedge ((v8\_rlvect\_1\ X0) \wedge ((v2\_bhsp\_1\ X0) \wedge (l1\_bhsp\_1\ X0))))))))))) \Rightarrow (v13\_lattices\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v5\_rlvect\_1\ X0) \wedge ((v6\_rlvect\_1\ X0) \wedge ((v7\_rlvect\_1\ X0) \wedge ((v8\_rlvect\_1\ X0) \wedge ((v2\_bhsp\_1\ X0) \wedge (l1\_bhsp\_1\ X0))))))))))) \Rightarrow ((\neg v2\_struct\_0\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0))) \wedge ((v10\_lattices\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0))) \wedge (l3\_lattices\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.(l3\_lattices\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge((v13\_lattices\ X0)\wedge(v14\_lattices\ X0)))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge(v15\_lattices\ X0))) \tag{4}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v5\_rlvect\_1\ X0)\wedge((v6\_rlvect\_1\ X0)\wedge((v7\_rlvect\_1\ X0)\wedge((v8\_rlvect\_1\ X0)\wedge((v2\_bhsp\_1\ X0)\wedge(l1\_bhsp\_1\ X0))))))))))\Rightarrow((\neg v2\_struct\_0\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0)))\wedge((v10\_lattices\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0)))\wedge((v15\_lattices\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0)))\wedge(l3\_lattices\ (g3\_lattices\ (k3\_rusub\_2\ X0)\ (k5\_rusub\_2\ X0)\ (k6\_rusub\_2\ X0))))))$$