t19_ncfcont2 (TMVgjRk-FRTHQPrAoT1NJbNVibijLznVowcD)

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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 $v3\_normsp\_0 : \iota \Rightarrow o$ be given. Let $v4\_normsp\_0 : \iota \Rightarrow o$ be given. Let $v2\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v5\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v8\_clvect\_1 : \iota \Rightarrow o$ be given. Let $l2\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_ncfcont2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r7\_ncfcont1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k1\_normsp\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v3\_normsp\_0\ X0) \wedge ((v4\_normsp\_0\ X0) \wedge ((v2\_clvect\_1\ X0) \wedge ((v3\_clvect\_1\ X0) \wedge ((v4\_clvect\_1\ X0) \wedge ((v5\_clvect\_1\ X0) \wedge ((v8\_clvect\_1\ X0) \wedge (l2\_clvect\_1\ X0))))))))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v2\_rlvect\_1\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge ((v3\_normsp\_0\ X1) \wedge ((v4\_normsp\_0\ X1) \wedge ((v2\_clvect\_1\ X1) \wedge ((v3\_clvect\_1\ X1) \wedge ((v4\_clvect\_1\ X1) \wedge ((v5\_clvect\_1\ X1) \wedge ((v8\_clvect\_1\ X1) \wedge (l2\_clvect\_1\ X1))))))))))) \Rightarrow (\forall X2.\forall X3.((v1\_funct\_1\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))) \Rightarrow ((r7\_ncfcont1\ X0\ X1\ X3\ X2) \Leftrightarrow ((r1\_tarski\ X2\ (k1\_relset\_1\ (u1\_struct\_0\ X0)\ X3)) \wedge (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ k1\_numbers) \Rightarrow (\neg(X4 \in X2) \wedge ((\neg r1\_xxreal\_0\ X5\ k6\_numbers) \wedge (\forall X6.(m1\_subset\_1\ X6\ k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0\ X6\ k6\_numbers) \wedge (\forall X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ X0)) \Rightarrow (\neg(X7 \in X2) \wedge ((\neg r1\_xxreal\_0\ X6\ (k1\_normsp\_0\ X0\ (k5\_algstr\_0\ X0\ X7\ X4))) \wedge (r1\_xxreal\_0\ X5\ (k1\_normsp\_0\ X1\ (k5\_algstr\_0\ X1\ (k7\_partfun1\ (u1\_struct\_0\ X1)\ X3\ X7)\ (k7\_partfun1\ (u1\_struct\_0\ X1)\ X3\ X4)))))))))))))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v3\_normsp\_0\ X1)\wedge((v4\_normsp\_0\ X1)\wedge((v2\_clvect\_1\ X1)\wedge((v3\_clvect\_1\ X1)\wedge((v4\_clvect\_1\ X1)\wedge((v5\_clvect\_1\ X1)\wedge((v8\_clvect\_1\ X1)\wedge(l2\_clvect\_1\ X1))))))))))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v3\_normsp\_0\ X2)\wedge((v4\_normsp\_0\ X2)\wedge((v2\_clvect\_1\ X2)\wedge((v3\_clvect\_1\ X2)\wedge((v4\_clvect\_1\ X2)\wedge((v5\_clvect\_1\ X2)\wedge((v8\_clvect\_1\ X2)\wedge(l2\_clvect\_1\ X2))))))))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)))))\Rightarrow((r1\_ncfcont2\ X0\ X1\ X2\ X3)\Leftrightarrow((r1\_tarski\ X0\ (k1\_relset\_1\ (u1\_struct\_0\ X1)\ X3))\wedge(\forall X4.(m1\_subset\_1\ X4\ k1\_numbers)\Rightarrow(\neg(\neg r1\_xxreal\_0\ X4\ k6\_numbers)\wedge(\forall X5.(m1\_subset\_1\ X5\ k1\_numbers)\Rightarrow(\neg(\neg r1\_xxreal\_0\ X5\ k6\_numbers)\wedge(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X1))\Rightarrow(\forall X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ X1))\Rightarrow(\neg(X6\in X0)\wedge((X7\in X0)\wedge((\neg r1\_xxreal\_0\ X5\ (k1\_normsp\_0\ X1\ (k5\_algstr\_0\ X1\ X6\ X7)))\wedge(r1\_xxreal\_0\ X4\ (k1\_normsp\_0\ X2\ (k5\_algstr\_0\ X2\ (k7\_partfun1\ (u1\_struct\_0\ X2)\ X3\ X6)\ (k7\_partfun1\ (u1\_struct\_0\ X2)\ X3\ X7)))))))))))))))) \tag{2}$$

Theorem 1

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v3\_normsp\_0\ X1)\wedge((v4\_normsp\_0\ X1)\wedge((v2\_clvect\_1\ X1)\wedge((v3\_clvect\_1\ X1)\wedge((v4\_clvect\_1\ X1)\wedge((v5\_clvect\_1\ X1)\wedge((v8\_clvect\_1\ X1)\wedge(l2\_clvect\_1\ X1))))))))))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v3\_normsp\_0\ X2)\wedge((v4\_normsp\_0\ X2)\wedge((v2\_clvect\_1\ X2)\wedge((v3\_clvect\_1\ X2)\wedge((v4\_clvect\_1\ X2)\wedge((v5\_clvect\_1\ X2)\wedge((v8\_clvect\_1\ X2)\wedge(l2\_clvect\_1\ X2))))))))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)))))\Rightarrow((r1\_ncfcont2\ X0\ X1\ X2\ X3)\Rightarrow(r7\_ncfcont1\ X1\ X2\ X3\ X0))))$$