

## t48\_nfcont\_1

(TMVBgZr3anuKJtyyKodfis6aVGUZhnh7Sk)

October 27, 2020

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  $v3\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v4\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v2\_normsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_normsp\_1 : \iota \Rightarrow o$  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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r3\_nfcont\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r5\_nfcont\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge \\
 & ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v5\_rlvect\_1 \\
 & X1) \wedge ((v6\_rlvect\_1 X1) \wedge ((v7\_rlvect\_1 X1) \wedge ((v8\_rlvect\_1 X1) \wedge \\
 & ((v3\_normsp\_0 X1) \wedge ((v4\_normsp\_0 X1) \wedge ((v2\_normsp\_1 X1) \wedge (l1\_normsp\_1 \\
 & X1)))))))))) \Rightarrow (\forall X2. ((\neg v2\_struct\_0 X2) \wedge ((v13\_algstr\_0 \\
 & X2) \wedge ((v2\_rlvect\_1 X2) \wedge ((v3\_rlvect\_1 X2) \wedge ((v4\_rlvect\_1 X2) \wedge \\
 & ((v5\_rlvect\_1 X2) \wedge ((v6\_rlvect\_1 X2) \wedge ((v7\_rlvect\_1 X2) \wedge ((v8\_rlvect\_1 \\
 & X2) \wedge ((v3\_normsp\_0 X2) \wedge ((v4\_normsp\_0 X2) \wedge ((v2\_normsp\_1 X2) \wedge \\
 & (l1\_normsp\_1 X2)))))))))) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge \\
 & (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 \\
 & X2)))))) \Rightarrow ((r5\_nfcont\_1 X1 X2 X0 X3) \Rightarrow (r3\_nfcont\_1 X1 X2 X3 X0)))
 \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge \\
& ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v5\_rlvect\_1 \\
& X1) \wedge ((v6\_rlvect\_1 X1) \wedge ((v7\_rlvect\_1 X1) \wedge ((v8\_rlvect\_1 X1) \wedge \\
& ((v3\_normsp\_0 X1) \wedge ((v4\_normsp\_0 X1) \wedge ((v2\_normsp\_1 X1) \wedge (l1\_normsp\_1 \\
& X1)))))))))) \Rightarrow (\forall X2. ((\neg v2\_struct\_0 X2) \wedge ((v13\_algstr\_0 \\
& X2) \wedge ((v2\_rlvect\_1 X2) \wedge ((v3\_rlvect\_1 X2) \wedge ((v4\_rlvect\_1 X2) \wedge \\
& ((v5\_rlvect\_1 X2) \wedge ((v6\_rlvect\_1 X2) \wedge ((v7\_rlvect\_1 X2) \wedge ((v8\_rlvect\_1 \\
& X2) \wedge ((v3\_normsp\_0 X2) \wedge ((v4\_normsp\_0 X2) \wedge ((v2\_normsp\_1 X2) \wedge \\
& (l1\_normsp\_1 X2)))))))))) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge \\
& (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 \\
& X2)))))) \Rightarrow (((r1\_tarski X0 (k1\_relset\_1 (u1\_struct\_0 X1) X3)) \wedge ( \\
& v3\_funct\_1 (k2\_partfun1 (u1\_struct\_0 X1) (u1\_struct\_0 X2) X3 X0))) \Rightarrow \\
& (r5\_nfcont\_1 X1 X2 X0 X3)))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge \\
& ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v5\_rlvect\_1 \\
& X1) \wedge ((v6\_rlvect\_1 X1) \wedge ((v7\_rlvect\_1 X1) \wedge ((v8\_rlvect\_1 X1) \wedge \\
& ((v3\_normsp\_0 X1) \wedge ((v4\_normsp\_0 X1) \wedge ((v2\_normsp\_1 X1) \wedge (l1\_normsp\_1 \\
& X1)))))))))) \Rightarrow (\forall X2. ((\neg v2\_struct\_0 X2) \wedge ((v13\_algstr\_0 \\
& X2) \wedge ((v2\_rlvect\_1 X2) \wedge ((v3\_rlvect\_1 X2) \wedge ((v4\_rlvect\_1 X2) \wedge \\
& ((v5\_rlvect\_1 X2) \wedge ((v6\_rlvect\_1 X2) \wedge ((v7\_rlvect\_1 X2) \wedge ((v8\_rlvect\_1 \\
& X2) \wedge ((v3\_normsp\_0 X2) \wedge ((v4\_normsp\_0 X2) \wedge ((v2\_normsp\_1 X2) \wedge \\
& (l1\_normsp\_1 X2)))))))))) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge \\
& (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 \\
& X2)))))) \Rightarrow (((r1\_tarski X0 (k1\_relset\_1 (u1\_struct\_0 X1) X3)) \wedge ( \\
& v3\_funct\_1 (k2\_partfun1 (u1\_struct\_0 X1) (u1\_struct\_0 X2) X3 X0))) \Rightarrow \\
& (r3\_nfcont\_1 X1 X2 X3 X0)))
\end{aligned}$$