

# t3\_nfcont\_1 (TM- bRAVF2vuRMwKnnQSa8pM1iyeGzEDb9at6)

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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  $v3\_normsp\_0 : \iota \Rightarrow o$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $m1\_nfcont\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_normsp\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l2\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $l1\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (l2\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.(l2\_normsp\_0 X0) \Rightarrow ((l1\_normsp\_0 X0) \wedge (l2\_struct\_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l1\_normsp\_1 X0) \Rightarrow ((l1\_rlvect\_1 X0) \wedge (l2\_normsp\_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\ & X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)) \Rightarrow ((m1\_nfcont\_1 X2 X0 X1) \Leftrightarrow (\exists X3. \\ & (m1\_subset\_1 X3 k1\_numbers) \wedge ((\neg r1\_xxreal\_0 X3 k6\_numbers) \wedge ( \\ & r1\_tarski (ReplSep (toset (\lambda X4 : \iota.m1\_subset\_1 X4 (u1\_struct\_0 \\ & X0))) (\lambda X4 : \iota.\neg r1\_xxreal\_0 X3 (k1\_normsp\_0 X0 (k5\_algstr\_0 \\ & X0 X4 X1))) (\lambda X4 : \iota.X4) X2)))))) \end{aligned} \quad (9)$$

### Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\ & X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 k1\_numbers) \Rightarrow ((\neg r1\_xxreal\_0 X2 k6\_numbers) \Rightarrow (m1\_nfcont\_1 ( \\ & ReplSep (toset (\lambda X3 : \iota.m1\_subset\_1 X3 (u1\_struct\_0 X0))) \\ & (\lambda X3 : \iota.\neg r1\_xxreal\_0 X2 (k1\_normsp\_0 X0 (k5\_algstr\_0 X0 X3 \\ & X1))) (\lambda X3 : \iota.X3) X0 X1)))) \end{aligned}$$