

# t2\_nfcont\_4 (TMXgjwbMNWSPjCuZysYakQdg- WLNb4odQDoz)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  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  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $r1\_nfcont\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. 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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_nfcont\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_real\_ns1 : \iota \Rightarrow \iota$  be given. Let  $v1\_normsp\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (v1\_xreal\_0 X1) \Rightarrow (\forall X2. ((\neg v2\_struct\_0 \\
 & \quad X2) \wedge ((v13\_algstr\_0 X2) \wedge ((v2\_rlvect\_1 X2) \wedge ((v3\_rlvect\_1 X2) \wedge \\
 & \quad ((v4\_rlvect\_1 X2) \wedge ((v5\_rlvect\_1 X2) \wedge ((v6\_rlvect\_1 X2) \wedge ((v7\_rlvect\_1 \\
 & \quad X2) \wedge ((v8\_rlvect\_1 X2) \wedge ((v3\_normsp\_0 X2) \wedge ((v4\_normsp\_0 X2) \wedge \\
 & \quad ((v2\_normsp\_1 X2) \wedge (l1\_normsp\_1 X2)))))))))) \Rightarrow (\forall X3. \\
 & \quad ((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers \\
 & \quad (u1\_struct\_0 X2)))))) \Rightarrow (((X1 \in X0) \wedge (r1\_nfcont\_3 X2 X3 X1)) \Rightarrow (r1\_nfcont\_3 \\
 & \quad X2 (k2\_partfun1 k1\_numbers (u1\_struct\_0 X2) X3 X0) X1)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\
 & \quad (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 \\
 & \quad X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1))
 \end{aligned} \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_partfun1 X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \quad (4)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (5)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow((\neg v2\_struct\_0 (k4\_real\_ns1 X0))\wedge ((v13\_algstr\_0 (k4\_real\_ns1 X0))\wedge((v2\_rlvect\_1 (k4\_real\_ns1 X0))\wedge((v3\_rlvect\_1 (k4\_real\_ns1 X0))\wedge((v4\_rlvect\_1 (k4\_real\_ns1 X0))\wedge((v5\_rlvect\_1 (k4\_real\_ns1 X0))\wedge((v6\_rlvect\_1 (k4\_real\_ns1 X0))\wedge((v7\_rlvect\_1 (k4\_real\_ns1 X0))\wedge((v8\_rlvect\_1 (k4\_real\_ns1 X0))\wedge((v3\_normsp\_0 (k4\_real\_ns1 X0))\wedge((v4\_normsp\_0 (k4\_real\_ns1 X0))\wedge((v1\_normsp\_1 (k4\_real\_ns1 X0))\wedge(v2\_normsp\_1 (k4\_real\_ns1 X0)))))))))))))) \quad (6)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (7)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow((\neg v2\_struct\_0 (k4\_real\_ns1 X0))\wedge ((v1\_normsp\_1 (k4\_real\_ns1 X0))\wedge(l1\_normsp\_1 (k4\_real\_ns1 X0)))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((v1\_funct\_1 (k2\_partfun1 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \quad (10)$$

Assume the following.

$$\forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers)\Rightarrow(\forall X1. ((v1\_funct\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers (k1\_euclid X0)))))\Rightarrow(\forall X2.(v1\_xreal\_0 X2)\Rightarrow((r1\_nfcont\_4 X0 X1 X2)\Leftrightarrow(\exists X3.((v1\_funct\_1 X3)\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers (u1\_struct\_0 (k4\_real\_ns1 X0))))))\wedge ((X1 = X3)\wedge(r1\_nfcont\_3 (k4\_real\_ns1 X0) X3 X2)))))) \quad (11)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (12)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & \forall X2.(v1\_xreal\_0 X2) \Rightarrow (\forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers (k1\_euclid X0)))))) \Rightarrow ( \\ & ((X2 \in X1) \wedge (r1\_nfcont\_4 X0 X3 X2)) \Rightarrow (r1\_nfcont\_4 X0 (k2\_partfun1 \\ & k1\_numbers (k1\_euclid X0) X3 X1) X2))) \end{aligned}$$