

# t31\_fcont\_1 (TMH- nAX9zzdSBj4TBMydMV32dfAXBBDQFrFhw)

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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  $k1\_numbers : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_rcomp\_1 : \iota \Rightarrow o$  be given. Let  $v1\_fcont\_1 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k7\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (k9\_xtuple\_0 (k5\_relat\_1 X1 X0) = k3\_xboole\_0 (k9\_xtuple\_0 X1) X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X0 \in k9\_xtuple\_0 (k5\_relat\_1 X2 X1)) \Rightarrow (k1\_funct\_1 (k5\_relat\_1 X2 X1) X0 = k1\_funct\_1 X2 X0)) \quad (2)$$

Assume the following.

$$\forall X0. ((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow (\neg (k1\_relset\_1 k1\_numbers X0 \neq k1\_xboole\_0) \wedge ((v1\_rcomp\_1 (k1\_relset\_1 k1\_numbers X0)) \wedge ((v1\_fcont\_1 (k2\_partfun1 k1\_numbers k1\_numbers X0 (k1\_relset\_1 k1\_numbers X0))) \wedge (\forall X1. (v1\_xreal\_0 X1) \Rightarrow (\forall X2. (v1\_xreal\_0 X2) \Rightarrow (\neg (X1 \in k1\_relset\_1 k1\_numbers X0) \wedge ((X2 \in k1\_relset\_1 k1\_numbers X0) \wedge ((k1\_seq\_1 X0 X1 = k4\_seq\_4 (k2\_relset\_1 k1\_numbers X0)) \wedge (k1\_seq\_1 X0 X2 = k5\_seq\_4 (k2\_relset\_1 k1\_numbers X0)))))))))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarSKI X0 X1)\Rightarrow(k3\_xboole\_0 X0 X1 = X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 X1)\Rightarrow(k10\_xtuple\_0 (k5\_relat\_1 X1 X0) = k7\_relat\_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(k7\_relset\_1 X0 X1 X2 X3 = k7\_relat\_1 X2 X3) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow(k2\_relset\_1 X0 X1 = k10\_xtuple\_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_partfun1 X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 X0)))\Rightarrow(k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\Rightarrow(k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0)\Rightarrow(k5\_relat\_1 X0 (k9\_xtuple\_0 X0) = X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge(v1\_funct\_1 X0))\Rightarrow((v1\_relat\_1 (k5\_relat\_1 X0 X1))\wedge(v1\_funct\_1 (k5\_relat\_1 X0 X1))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge(v3\_valued\_0 X0))\Rightarrow((v1\_relat\_1 (k5\_relat\_1 X0 X1))\wedge(v3\_valued\_0 (k5\_relat\_1 X0 X1))) \quad (13)$$

Assume the following.

$$v3\_membered\ k1\_numbers \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X0)\Rightarrow(v1\_relat\_1\ (k5\_relat\_1\ X0\ X1)) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge \\ & (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow((v1\_funct\_1 \\ & (k2\_partfun1\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k2\_partfun1\ X0\ X1\ X2\ X3) \\ & (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0\ X0\ X1 = k3\_xboole\_0\ X1\ X0 \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v3\_valued\_0\ X2)) \quad (20)$$

### Theorem 1

$$\begin{aligned} & \forall X0.((v1\_funct\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1 \\ & k1\_numbers\ k1\_numbers))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ & k1\_numbers))\Rightarrow(\neg(X1\neq k1\_xboole\_0)\wedge((r1\_tarski\ X1\ (k1\_relset\_1 \\ & k1\_numbers\ X0))\wedge((v1\_rcomp\_1\ X1)\wedge((v1\_fcont\_1\ (k2\_partfun1 \\ & k1\_numbers\ k1\_numbers\ X0\ X1))\wedge(\forall X2.(v1\_xreal\_0\ X2)\Rightarrow(\forall X3. \\ & (v1\_xreal\_0\ X3)\Rightarrow(\neg(X2\in X1)\wedge((X3\in X1)\wedge((k1\_seq\_1\ X0\ X2 = k4\_seq\_4 \\ & (k7\_relset\_1\ k1\_numbers\ k1\_numbers\ X0\ X1))\wedge(k1\_seq\_1\ X0\ X3 = k5\_seq\_4 \\ & (k7\_relset\_1\ k1\_numbers\ k1\_numbers\ X0\ X1)))))))))) \end{aligned}$$