

## t110\_funct\_4

(TMViDCgzt1euQHjA8fCRD5aeLysKjj9iLjQ)

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Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarSKI : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarSKI : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (k9\_xtuple\_0 (k2\_funcop\_1 X0 X1) = X0) \wedge (r1\_tarSKI (k10\_xtuple\_0 (k2\_funcop\_1 X0 X1)) (k1\_tarSKI X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k7\_funcop\_1 X0 X1 = k2\_funcop\_1 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 (k2\_funcop\_1 X0 X1)) \wedge ((v4\_relat\_1 (k2\_funcop\_1 X0 X1) X0) \wedge ((v1\_funct\_1 (k2\_funcop\_1 X0 X1)) \wedge (v1\_partfun1 (k2\_funcop\_1 X0 X1) X0))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 (k16\_funcop\_1 X0 X1)) \wedge (v1\_funct\_1 (k16\_funcop\_1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_funct\_1 (k7\_funcop\_1 X0 X1)) \wedge ((v1\_funct\_2 (k7\_funcop\_1 X0 X1) X0 (k1\_tarSKI X1)) \wedge (m1\_subset\_1 (k7\_funcop\_1 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 (k1\_tarSKI X1)))))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1 X0)\wedge(v1\_funct\_1 X0))\wedge((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1)))\Rightarrow((v1\_relat\_1 (k1\_funct\_4 X0 X1))\wedge(v1\_funct\_1 (k1\_funct\_4 X0 X1))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1 X0 X1 = k7\_funcop\_1 (k1\_tarski X0) X1 \quad (7)$$

Assume the following.

$$\forall X0.k1\_ordinal1 X0 = k2\_xboole\_0 X0 (k1\_tarski X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0)\wedge(v1\_funct\_1 X0))\Rightarrow(\forall X1.((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1))\Rightarrow(\forall X2.((v1\_relat\_1 X2)\wedge(v1\_funct\_1 X2))\Rightarrow((X2 = k1\_funct\_4 X0 X1)\Leftrightarrow((k9\_xtuple\_0 X2 = k2\_xboole\_0 (k9\_xtuple\_0 X0) (k9\_xtuple\_0 X1))\wedge(\forall X3.(X3 \in k2\_xboole\_0 (k9\_xtuple\_0 X0) (k9\_xtuple\_0 X1))\Rightarrow(((X3 \in k9\_xtuple\_0 X1)\Rightarrow(k1\_funct\_1 X2 X3 = k1\_funct\_1 X1 X3))\wedge((\neg X3 \in k9\_xtuple\_0 X1)\Rightarrow(k1\_funct\_1 X2 X3 = k1\_funct\_1 X0 X3)))))))))) \end{aligned} \quad (9)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.k9\_xtuple\_0 (k1\_funct\_4 (k1\_funct\_4 (k7\_funcop\_1 X1 X2) (k16\_funcop\_1 X1 X0)) (k16\_funcop\_1 (k1\_ordinal1 X1) X0)) = k1\_ordinal1 (k1\_ordinal1 X1)$$