

## t33\_cfunct\_1

(TMdF21VUb4Md4LWCep8BSJWtCWEvyZd9GXc)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $k2\_numbers : \iota$  be given. Let  $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k46\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k31\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $k45\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k30\_valued\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow ((r2\_relset\_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1\_membered X1) \wedge ((v1\_membered X2) \wedge (((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \wedge ((v1\_funct\_1 X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X2)))))))) \Rightarrow (k46\_valued\_1 X0 X1 X2 X3 X4 = k45\_valued\_1 X3 X4) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_membered X1) \wedge ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow (k31\_valued\_1 X0 X1 X2 = k30\_valued\_1 X2) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1\_membered X1) \wedge ((v1\_membered X2) \wedge (((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \wedge ((v1\_funct\_1 X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X2)))))))) \Rightarrow (k2\_valued\_1 X0 X1 X2 X3 X4 = k1\_valued\_1 X3 X4) \quad (4)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_valued\_0 X0))) \Rightarrow (k30\_valued\_1 (k30\_valued\_1 X0) = X0) \quad (5)$$

Assume the following.

$$v1\_membered\ k2\_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v1\_membered \\ & X1) \wedge ((v1\_membered\ X2) \wedge ((v1\_funct\_1\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ X0\ X1)))) \wedge ((v1\_funct\_1\ X4) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ X0\ X2)))))) \Rightarrow ((v1\_funct\_1\ (k46\_valued\_1\ X0\ X1\ X2 \\ & X3\ X4)) \wedge (m1\_subset\_1\ (k46\_valued\_1\ X0\ X1\ X2\ X3\ X4)\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ X0\ k2\_numbers)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_membered\ X1) \wedge ((v1\_funct\_1 \\ & X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))) \Rightarrow ((v1\_funct\_1 \\ & (k31\_valued\_1\ X0\ X1\ X2)) \wedge (m1\_subset\_1\ (k31\_valued\_1\ X0\ X1\ X2)\ ( \\ & k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k2\_numbers)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_valued\_0\ X0))) \Rightarrow \\ & ((v1\_relat\_1\ (k30\_valued\_1\ X0)) \wedge ((v1\_funct\_1\ (k30\_valued\_1 \\ & X0)) \wedge (v1\_valued\_0\ (k30\_valued\_1\ X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_valued\_0\ X0))) \Rightarrow \\ & (\forall X1. ((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_valued\_0 \\ & X1)))) \Rightarrow (k45\_valued\_1\ X0\ X1 = k1\_valued\_1\ X0\ (k30\_valued\_1\ X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_valued\_0 \\ & X0))) \wedge ((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_valued\_0\ X1)))) \Rightarrow \\ & (k1\_valued\_1\ X0\ X1 = k1\_valued\_1\ X1\ X0) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ X0\ X1))) \Rightarrow (v1\_relat\_1\ X2) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1\_membered\ X1) \Rightarrow (\forall X2. (m1\_subset\_1 \\ & X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))) \Rightarrow (v1\_valued\_0\ X2)) \end{aligned} \quad (13)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge \\ m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers)))) \Rightarrow ( \\ \forall X2.((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ X0 k2\_numbers)))) \Rightarrow (r2\_reset\_1 X0 k2\_numbers (k46\_valued\_1 X0 \\ k2\_numbers k2\_numbers X1 (k31\_valued\_1 X0 k2\_numbers X2)) (k2\_valued\_1 \\ X0 k2\_numbers k2\_numbers X1 X2)))) \end{aligned}$$