

## t31\_cfunct\_1

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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  $k31\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k25\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k6\_complex1 : \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $k30\_valued\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_membered X1) \wedge ((v1\_funct\_1 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow (k31\_valued\_1 \\ & X0 X1 X2 = k30\_valued\_1 X2) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_membered X1) \wedge \\ & (((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))) \wedge (v1\_xcmplx\_0 X3))) \Rightarrow (k25\_valued\_1 X0 X1 X2 X3 = k24\_valued\_1 \\ & X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1\_subset\_1 X0 k2\_numbers) \Rightarrow (k10\_complex1 X0 = k4\_xcmplx\_0 \\ & X0) \end{aligned} \quad (4)$$

Assume the following.

$$v1\_membered k2\_numbers \quad (5)$$

Assume the following.

$$m1\_subset\_1 \ k6\_complex1 \ k2\_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1\_membered \ X1)\wedge((v1\_funct\_1 \\ X2)\wedge(m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))))))\Rightarrow((v1\_funct\_1 \\ (k31\_valued\_1 \ X0 \ X1 \ X2))\wedge(m1\_subset\_1 \ (k31\_valued\_1 \ X0 \ X1 \ X2) \ ( \\ k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ k2\_numbers)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k2\_numbers)\Rightarrow(m1\_subset\_1 \ (k10\_complex1 \ X0) \ k2\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 \ X0)\wedge((v1\_funct\_1 \ X0)\wedge(v1\_valued\_0 \ X0)))\Rightarrow \\ (k30\_valued\_1 \ X0 = k24\_valued\_1 \ X0 \ (k4\_xcmplx\_0 \ np\_1)) \quad (9)$$

Assume the following.

$$k6\_complex1 = np\_1 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 \ X0 \ X1)))\Rightarrow(v1\_relat\_1 \ X2) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_membered \ X1)\Rightarrow(\forall X2.(m1\_subset\_1 \\ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1)))\Rightarrow(v1\_valued\_0 \ X2)) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_membered \ X0)\Rightarrow(\forall X1.(m1\_subset\_1 \ X1 \ X0)\Rightarrow \\ (v1\_xcmplx\_0 \ X1)) \quad (13)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 \ X0)\Rightarrow(\forall X1.((v1\_funct\_1 \ X1)\wedge( \\ m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ k2\_numbers))))\Rightarrow( \\ r2\_relset\_1 \ X0 \ k2\_numbers \ (k31\_valued\_1 \ X0 \ k2\_numbers \ X1) \ (k25\_valued\_1 \\ X0 \ k2\_numbers \ X1 \ (k10\_complex1 \ k6\_complex1)))) \end{aligned}$$