t4_functor0 (TMGvzt-nCC53UmMpfXx116ckXALmFiN1MWXk)

October 27, 2020

Let $v1\_funct\_1 : \iota \Rightarrow o$ 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 $v2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k16\_funct\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k15\_funct\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(k2\_zfmisc\_1\ X0\ X0 = k2\_zfmisc\_1\ X1\ X1) \Rightarrow (X0 = X1) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (k10\_xtuple\_0\ (k15\_funct\_3\ X0\ X1) = k2\_zfmisc\_1\ (k10\_xtuple\_0\ X0)\ (k10\_xtuple\_0\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v5\_relat\_1\ X1\ X0)) \Rightarrow (k2\_relset\_1\ X0\ X1 = k10\_xtuple\_0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. (((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ X0\ X2) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X2))))) \wedge ((v1\_funct\_1\ X5) \wedge ((v1\_funct\_2\ X5\ X1\ X3) \wedge (m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X3)))))) \Rightarrow (k16\_funct\_3\ X0\ X1\ X2\ X3\ X4\ X5 = k15\_funct\_3\ X4\ X5) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1\ (k2\_zfmisc\_1\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ (((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X0\ X2)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X2)))))\wedge((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X1\ X3)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X3))))))\Rightarrow((v1\_funct\_1\ (k16\_funct\_3\ X0\ X1\ X2\ X3\ X4\ X5))\wedge((v1\_funct\_2\ (k16\_funct\_3\ X0\ X1\ X2\ X3\ X4\ X5)\ (k2\_zfmisc\_1\ X0\ X1)\ (k2\_zfmisc\_1\ X2\ X3))\wedge(m1\_subset\_1\ (k16\_funct\_3\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)\ (k2\_zfmisc\_1\ X2\ X3))))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v5\_relat\_1\ X1\ X0))\Rightarrow((v2\_funct\_2\ X1\ X0)\Leftrightarrow(k2\_relset\_1\ X0\ X1 = X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_relat\_1\ X1)) \tag{9}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow((v2\_funct\_2\ X2\ X1)\Leftrightarrow(v2\_funct\_2\ (k16\_funct\_3\ X0\ X0\ X1\ X1\ X2\ X2)\ (k2\_zfmisc\_1\ X1\ X1)))$$