t2_tmap_1 (TMLFdo-QDvVUmhM2asMjcY2UC7aDT7Gmroog)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ 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 $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((r1\_tarski\ X0\ X1) \Rightarrow ((k5\_relat\_1\ (k5\_relat\_1\ X2\ X0)\ X1 = k5\_relat\_1\ X2\ X0) \wedge (k5\_relat\_1\ (k5\_relat\_1\ X2\ X1)\ X0 = k5\_relat\_1\ X2\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ (k3\_xboole\_0\ X0\ X1)\ X0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X1) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \wedge ((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ X0\ X1) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))) \Rightarrow (r2\_funct\_2\ X0\ X1\ X2\ X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)) \Rightarrow (k9\_subset\_1\ X0\ X1\ X2 = k3\_xboole\_0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow (k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X2\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))))\Rightarrow(\forall X5.((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X3\ X1)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X3\ X1)))))\Rightarrow((k2\_partfun1\ X2\ X1\ X4\ (k9\_subset\_1\ X0\ X2\ X3) = k2\_partfun1\ X3\ X1\ X5\ (k9\_subset\_1\ X0\ X2\ X3))\Rightarrow(\forall X6.((v1\_funct\_1\ X6)\wedge((v1\_funct\_2\ X6\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)\wedge(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)))))\Rightarrow((X6 = k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\Leftrightarrow((k2\_partfun1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X6\ X2 = X4)\wedge(k2\_partfun1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X6\ X3 = X5)))))))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0))\Rightarrow(k9\_subset\_1\ X0\ X1\ X2 = k9\_subset\_1\ X0\ X2\ X1) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{9}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)))))\Rightarrow(\forall X5.((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X2\ X1)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))))\Rightarrow(\forall X6.((v1\_funct\_1\ X6)\wedge((v1\_funct\_2\ X6\ X3\ X1)\wedge(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X3\ X1)))))\Rightarrow(((k2\_partfun1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X4\ X2 = X5)\wedge(k2\_partfun1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X4\ X3 = X6))\Rightarrow(r2\_funct\_2\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X4\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X5\ X6)))))))))$$