t21_relset_2 (TMVjZnNCUSspu45JkPYoXr1aiY3N5FHVsr2)

October 27, 2020

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 $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k3\_relset\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_setfam\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((r1\_tarski\ (k10\_xtuple\_0\ X1)\ X0) \Rightarrow ((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k9\_xtuple\_0\ X1)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k9\_xtuple\_0\ X1)\ X0))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))) \Rightarrow (r1\_tarski\ (k10\_xtuple\_0\ (k3\_relset\_2\ X0\ X2))\ (k9\_setfam\_1\ (k2\_relset\_1\ X1\ X2))) \tag{2}$$

Assume the following.

$$\forall X0.k9\_setfam\_1\ X0 = k1\_zfmisc\_1\ X0 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1\ (k2\_zfmisc\_1\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow ((v1\_relat\_1\ (k3\_relset\_2\ X0\ X1)) \wedge (v1\_funct\_1\ (k3\_relset\_2\ X0\ X1))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((X2 = k3\_relset\_2\ X0\ X1) \Leftrightarrow ((k9\_xtuple\_0\ X2 = k9\_setfam\_1\ X0) \wedge (\forall X3.(r1\_tarski\ X3\ X0) \Rightarrow (k1\_funct\_1\ X2\ X3 = k7\_relat\_1\ X1\ X3))))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_relat\_1\ X1)) \tag{7}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v1\_funct\_1\ (k3\_relset\_2\ X0\ X2))\wedge((v1\_funct\_2\ (k3\_relset\_2\ X0\ X2)\ (k9\_setfam\_1\ X0)\ (k9\_setfam\_1\ (k2\_relset\_1\ X1\ X2)))\wedge(m1\_subset\_1\ (k3\_relset\_2\ X0\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k9\_setfam\_1\ X0)\ (k9\_setfam\_1\ (k2\_relset\_1\ X1\ X2)))))))$$