t8_partfun2 (TMS-FikrxkoEurT8kTVHWM9vJeaj7WKQftpR)

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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 $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(k9\_xtuple\_0\ (k4\_relat\_1\ X0) = X0) \wedge (k10\_xtuple\_0\ (k4\_relat\_1\ X0) = X0) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (\forall X2.(\neg v1\_xboole\_0\ X2) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X0)))) \Rightarrow (\forall X4.((v1\_funct\_1\ X4) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow (\forall X5.((v1\_funct\_1\ X5) \wedge (m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))) \Rightarrow ((r2\_relset\_1\ X2\ X1\ X5\ (k1\_partfun1\ X2\ X0\ X0\ X1\ X3\ X4)) \Leftrightarrow ((\forall X6.(m1\_subset\_1\ X6\ X2) \Rightarrow ((X6 \in k1\_relset\_1\ X2\ X5) \Leftrightarrow ((X6 \in k1\_relset\_1\ X2\ X3) \wedge (k7\_partfun1\ X0\ X3\ X6 \in k1\_relset\_1\ X0\ X4)))) \wedge (\forall X6.(m1\_subset\_1\ X6\ X2) \Rightarrow ((X6 \in k1\_relset\_1\ X2\ X5) \Rightarrow (k7\_partfun1\ X1\ X5\ X6 = k7\_partfun1\ X1\ X4\ (k7\_partfun1\ X0\ X3\ X6)))))))))))) \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v4\_relat\_1\ X1\ X0)) \Rightarrow (k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k1\_partfun2\ X0\ X1 = k4\_relat\_1\ X1) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k4\_relat\_1\ X0))\wedge(v1\_funct\_1\ (k4\_relat\_1\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))\Rightarrow((v1\_funct\_1\ (k1\_partfun2\ X0\ X1))\wedge(m1\_subset\_1\ (k1\_partfun2\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.(((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge((v1\_funct\_1\ X5)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3)))))\Rightarrow((v1\_funct\_1\ (k1\_partfun1\ X0\ X1\ X2\ X3\ X4\ X5))\wedge(m1\_subset\_1\ (k1\_partfun1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X3)))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{9}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))\Rightarrow((X2\in k1\_relset\_1\ X0\ (k1\_partfun1\ X0\ X0\ X0\ X0\ X3\ (k1\_partfun2\ X0\ X1)))\Leftrightarrow((X2\in k1\_relset\_1\ X0\ X3)\wedge(k7\_partfun1\ X0\ X3\ X2\in X1))))))$$