t55_partfun2 (TMby3NXvURtN9CSxrKd7oNs3ehnGeUykeJa)

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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 $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((X0 \in k9\_xtuple\_0\ (k6\_relat\_1\ X1\ X2)) \Rightarrow (k1\_funct\_1\ (k6\_relat\_1\ X1\ X2)\ X0 = k1\_funct\_1\ X2\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((X0 \in k9\_xtuple\_0\ (k6\_relat\_1\ X1\ X2)) \Leftrightarrow ((X0 \in k9\_xtuple\_0\ X2) \wedge (k1\_funct\_1\ X2\ X0 \in X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((k4\_tarski\ X0\ X1 \in X2) \Leftrightarrow ((X0 \in k9\_xtuple\_0\ X2) \wedge (X1 = k1\_funct\_1\ X2\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge ((v1\_funct\_1\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))) \Rightarrow (k3\_partfun2\ X0\ X1\ X2\ X3 = k6\_relat\_1\ X2\ X3) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v4\_relat\_1\ X1\ X0)) \Rightarrow (k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge ((\neg v1\_xboole\_0\ X1)\wedge((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((v1\_funct\_1\ (k3\_partfun2\ X0\ X1\ X2\ X3))\wedge (m1\_subset\_1\ (k3\_partfun2\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v5\_relat\_1\ X1\ X0)\wedge(v1\_funct\_1\ X1)))\Rightarrow(\forall X2.(X2 \in k9\_xtuple\_0\ X1)\Rightarrow(k7\_partfun1\ X0\ X1\ X2 = k1\_funct\_1\ X1\ X2)) \tag{7}$$

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.

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

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X1))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ X0)\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow(((X3 \in k1\_relset\_1\ X0\ X4)\wedge(k7\_partfun1\ X1\ X4\ X3 \in X2))\Leftrightarrow(k4\_tarski\ X3\ (k7\_partfun1\ X1\ X4\ X3) \in k3\_partfun2\ X0\ X1\ X2\ X4))))))$$