t22_matrix_2 (TMM-bEG9BRAxfnLmpampY7TpM9qjsgLjYp3G)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $m1\_matrix\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12\_matrix\_2 : \iota \Rightarrow \iota$ be given. Let $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k11\_matrix\_2 : \iota \Rightarrow \iota$ be given. Let $k2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_finseq\_2 : \iota \Rightarrow \iota$ 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 $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_partfun1 : \iota \Rightarrow \iota$ be given. Let $k4\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_funct\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v3\_matrix\_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ X0\ X0) \wedge ((v3\_funct\_2\ X1\ X0\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))) \Rightarrow ((r2\_relset\_1\ X0\ X0\ (k1\_partfun1\ X0\ X0\ X0\ X0\ X1\ (k2\_funct\_2\ X0\ X1))\ (k6\_partfun1\ X0)) \wedge (r2\_relset\_1\ X0\ X0\ (k1\_partfun1\ X0\ X0\ X0\ X0\ X0\ (k2\_funct\_2\ X0\ X1)\ X1)\ (k6\_partfun1\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow ((v1\_funct\_1\ (k1\_finseq\_2\ X0)) \wedge ((v1\_funct\_2\ (k1\_finseq\_2\ X0)\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1\ X0)) \wedge ((v3\_funct\_2\ (k1\_finseq\_2\ X0)\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1\ X0)) \wedge (m1\_subset\_1\ (k1\_finseq\_2\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1\ X0))))))) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (k11\_matrix\_2\ (k12\_matrix\_2\ X0) = X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow ((r2\_relset\_1\ X0\ X1\ X2\ X3) \Leftrightarrow (X2 = X3)) \tag{4}$$

Assume the following.

$$\forall X0.k6\_partfun1\ X0 = k4\_relat\_1\ X0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ X0\ X0)\wedge ((v3\_funct\_2\ X1\ X0\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))\Rightarrow(k2\_funct\_2\ X0\ X1 = k2\_funct\_1\ X1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ (((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge((v1\_funct\_1\ X5)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3)))))\Rightarrow(k1\_partfun1\ X0\ X1\ X2\ X3\ X4\ X5 = k3\_relat\_1\ X4\ X5) \tag{7}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((\neg v1\_xboole\_0\ (k12\_matrix\_2\ X0))\wedge (v3\_matrix\_2\ (k12\_matrix\_2\ X0))) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v3\_matrix\_2\ X0))\Rightarrow(\forall X1.\ (m1\_matrix\_2\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (k2\_finseq\_1\ (k11\_matrix\_2\ X0))\ (k2\_finseq\_1\ (k11\_matrix\_2\ X0)))\wedge((v3\_funct\_2\ X1\ (k2\_finseq\_1\ (k11\_matrix\_2\ X0))\ (k2\_finseq\_1\ (k11\_matrix\_2\ X0)))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_finseq\_1\ (k11\_matrix\_2\ X0))\ (k2\_finseq\_1\ (k11\_matrix\_2\ X0))))))))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ X0\ X0)\wedge ((v3\_funct\_2\ X1\ X0\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))\Rightarrow((v1\_funct\_1\ (k2\_funct\_2\ X0\ X1))\wedge((v1\_funct\_2\ (k2\_funct\_2\ X0\ X1)\ X0\ X0)\wedge((v3\_funct\_2\ (k2\_funct\_2\ X0\ X1)\ X0\ X0)\wedge(m1\_subset\_1\ (k2\_funct\_2\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ (((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge((v1\_funct\_1\ X5)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3)))))\Rightarrow((v1\_funct\_1\ (k1\_partfun1\ X0\ X1\ X2\ X3\ X4\ X5))\wedge(m1\_subset\_1\ (k1\_partfun1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X3)))) \tag{11}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (k1\_finseq\_2\ X0 = k6\_partfun1\ (k2\_finseq\_1\ X0)) \tag{12}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m1\_matrix\_2\ X1\ (k12\_matrix\_2\ X0)) \Rightarrow ((k1\_partfun1\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ (k2\_funct\_2\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ X1)\ X1 = k1\_finseq\_2\ X0) \wedge (k1\_partfun1\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ X1\ (k2\_funct\_2\ (k2\_finseq\_1\ (k11\_matrix\_2\ (k12\_matrix\_2\ X0)))\ X1) = k1\_finseq\_2\ X0)))$$