t23_matrlin (TMa8btNuD6mF7A2JDuHRC2bd5cVaxUynz3P)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k8\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_matrlin : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_matrix\_1 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow (r1\_tarski\ (k4\_finseq\_1\ X0)\ (k4\_finseq\_1\ (k7\_finseq\_1\ X0\ X1)))) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge (m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow((X2\in k4\_finseq\_1\ X1)\Rightarrow(k1\_funct\_1\ X1\ X2 = k8\_matrix\_1\ X0\ X1\ X2)))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.((\neg v1\_xboole\_0\ X0)\wedge((v7\_ordinal1\ X1)\wedge((v7\_ordinal1\ X2)\wedge((v7\_ordinal1\ X3)\wedge((m1\_matrix\_1\ X4\ X0\ X1\ X3)\wedge(m1\_matrix\_1\ X5\ X0\ X2\ X3))))))\Rightarrow(k8\_matrlin\ X0\ X1\ X2\ X3\ X4\ X5 = k7\_finseq\_1\ X4\ X5) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow(k4\_finseq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(v7\_ordinal1\ (k2\_xcmplx\_0\ X0\ X1)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((v7\_ordinal1\ X1)\wedge(v7\_ordinal1\ X2)))\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ X0\ X1\ X2)\Rightarrow((v1\_matrix\_1\ X3)\wedge(m2\_finseq\_1\ X3\ (k3\_finseq\_2\ X0)))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.((\neg v1\_xboole\_0\ X0)\wedge((v7\_ordinal1\ X1)\wedge((v7\_ordinal1\ X2)\wedge((v7\_ordinal1\ X3)\wedge((m1\_matrix\_1\ X4\ X0\ X1\ X3)\wedge(m1\_matrix\_1\ X5\ X0\ X2\ X3))))))\Rightarrow(m1\_matrix\_1\ (k8\_matrlin\ X0\ X1\ X2\ X3\ X4\ X5)\ X0\ (k2\_xcmplx\_0\ X1\ X2)\ X3) \tag{14}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v1\_finseq\_1\ X2)))\Rightarrow((X2 = k7\_finseq\_1\ X0\ X1)\Leftrightarrow((k4\_finseq\_1\ X2 = k2\_finseq\_1\ (k2\_nat\_1\ (k3\_finseq\_1\ X0)\ (k3\_finseq\_1\ X1)))\wedge((\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k4\_finseq\_1\ X0)\Rightarrow(k1\_funct\_1\ X2\ X3 = k1\_funct\_1\ X0\ X3)))\wedge(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k4\_finseq\_1\ X1)\Rightarrow(k1\_funct\_1\ X2\ (k2\_nat\_1\ (k3\_finseq\_1\ X0)\ X3) = k1\_funct\_1\ X1\ X3)))))))) \tag{15}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(v7\_ordinal1\ X3)\Rightarrow(\forall X4.(\neg v1\_xboole\_0\ X4)\Rightarrow(\forall X5.(m1\_matrix\_1\ X5\ X4\ X0\ X1)\Rightarrow(\forall X6.(m1\_matrix\_1\ X6\ X4\ X2\ X1)\Rightarrow((X3 \in k9\_xtuple\_0\ X5)\Rightarrow(k8\_matrix\_1\ X4\ (k8\_matrlin\ X4\ X0\ X2\ X1\ X5\ X6)\ X3 = k8\_matrix\_1\ X4\ X5\ X3)))))))))$$