t34_matrix_1 (TMPGbDxhUPEPJ67hLo7tNHjV6b4qXuZrSPp)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k14\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_matrix\_1 : \iota \Rightarrow o$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (\forall X3.((\neg v2\_struct\_0\ X3) \wedge (l6\_algstr\_0\ X3)) \Rightarrow ((k4\_tarski\ X0\ X1 \in k2\_matrix\_1\ (k11\_matrix\_1\ X3\ X2)) \Rightarrow (k3\_matrix\_1\ (u1\_struct\_0\ X3)\ (k11\_matrix\_1\ X3\ X2)\ X0\ X1 = k4\_struct\_0\ X3)))))) \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2.(\neg v1\_xboole\_0\ X2) \Rightarrow (\forall X3.(m1\_matrix\_1\ X3\ X2\ X0\ X1) \Rightarrow (\forall X4.(m1\_matrix\_1\ X4\ X2\ X0\ X1) \Rightarrow (k2\_matrix\_1\ X3 = k2\_matrix\_1\ X4)))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_struct\_0\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((v7\_ordinal1\ X1)\wedge(v7\_ordinal1\ X2)))\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ X0\ X1\ X2)\Rightarrow((v1\_matrix\_1\ X3)\wedge(m2\_finseq\_1\ X3\ (k3\_finseq\_2\ X0)))) \tag{5}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow((l2\_algstr\_0\ X0)\wedge(l5\_algstr\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l1\_algstr\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_algstr\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_matrix\_1\ X1)\wedge(m1\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\wedge((v7\_ordinal1\ X2)\wedge(v7\_ordinal1\ X3)))\Rightarrow(m1\_subset\_1\ (k3\_matrix\_1\ X0\ X1\ X2\ X3)\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\wedge((v7\_ordinal1\ X1)\wedge(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X0)\ X1\ X1)))\Rightarrow(m1\_matrix\_1\ (k13\_matrix\_1\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)\ X1\ X1) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\wedge(v7\_ordinal1\ X1))\Rightarrow(m1\_matrix\_1\ (k11\_matrix\_1\ X0\ X1)\ (u1\_struct\_0\ X0)\ X1\ X1) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X0)\ X1\ X1)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X0)\ X1\ X1)\Rightarrow(\forall X4.(m1\_matrix\_1\ X4\ (u1\_struct\_0\ X0)\ X1\ X1)\Rightarrow((X4 = k14\_matrix\_1\ X0\ X1\ X2\ X3)\Leftrightarrow(\forall X5.(v7\_ordinal1\ X5)\Rightarrow(\forall X6.(v7\_ordinal1\ X6)\Rightarrow((k4\_tarski\ X5\ X6 \in k2\_matrix\_1\ X2)\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X4\ X5\ X6 = k1\_algstr\_0\ X0\ (k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X2\ X5\ X6)\ (k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X5\ X6)))))))))) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow(\forall X1.\ (v7\_ordinal1\ X1)\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X0)\ X1\ X1)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X0)\ X1\ X1)\Rightarrow((X3 = k13\_matrix\_1\ X0\ X1\ X2)\Leftrightarrow(\forall X4.(v7\_ordinal1\ X4)\Rightarrow(\forall X5.\ (v7\_ordinal1\ X5)\Rightarrow((k4\_tarski\ X4\ X5 \in k2\_matrix\_1\ X2)\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k4\_algstr\_0\ X0\ (k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X2\ X4\ X5)))))))))) \tag{13}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l2\_algstr\_0\ X0))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(v13\_algstr\_0\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((X2 = k4\_algstr\_0\ X0\ X1)\Leftrightarrow(k1\_algstr\_0\ X0\ X1\ X2 = k4\_struct\_0\ X0))))) \tag{14}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow(\forall X1.\ (v7\_ordinal1\ X1)\Rightarrow(k11\_matrix\_1\ X0\ X1 = k5\_finseq\_2\ (k4\_finseq\_2\ X1\ (u1\_struct\_0\ X0))\ X1\ (k5\_finseq\_2\ (u1\_struct\_0\ X0)\ X1\ (k4\_struct\_0\ X0)))) \tag{15}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow(k14\_matrix\_1\ X1\ X0\ X2\ (k13\_matrix\_1\ X1\ X0\ X2) = k11\_matrix\_1\ X1\ X0)))$$