t47_matrix14 (TMUxconDctiDr77kqEx6QnS3t76s3bervS9)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v6\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v33\_algstr\_0 : \iota \Rightarrow o$ 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 $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ 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 $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_matrix14 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ 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 $k2\_finseq\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $k12\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4\_tarski\ X0\ X1 \in k2\_zfmisc\_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X0)\ X1\ X1)\Rightarrow(((r1\_xxreal\_0\ np\_\_1\ X2)\wedge((r1\_xxreal\_0\ X2\ X1)\wedge(X3 = k4\_matrix14\ X0\ X1\ X2)))\Rightarrow(\forall X4.(v7\_ordinal1\ X4)\Rightarrow(\forall X5.(v7\_ordinal1\ X5)\Rightarrow(((r1\_xxreal\_0\ np\_\_1\ X4)\wedge((r1\_xxreal\_0\ X4\ X1)\wedge((r1\_xxreal\_0\ np\_\_1\ X5)\wedge(r1\_xxreal\_0\ X5\ X1))))\Rightarrow((X2 = np\_\_1)\vee((((X4 = np\_\_1)\wedge(X5 = X2))\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k5\_struct\_0\ X0))\wedge((((X4 = X2)\wedge(X5 = np\_\_1))\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k5\_struct\_0\ X0))\wedge((((X4 = np\_\_1)\wedge(X5 = np\_\_1))\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k4\_struct\_0\ X0))\wedge((((X4 = X2)\wedge(X5 = X2))\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k4\_struct\_0\ X0))\wedge((\neg((X4 = np\_\_1)\vee(X4 = X2))\wedge((X5 = np\_\_1)\vee(X5 = X2)))\Rightarrow(((X4 = X5)\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k5\_struct\_0\ X0))\wedge((X4 \neq X5)\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k4\_struct\_0\ X0))))))))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\forall X2.(\neg v1\_xboole\_0\ X2)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ X2\ X0\ X1)\Rightarrow(\forall X4.(m1\_matrix\_1\ X4\ X2\ X0\ X1)\Rightarrow((\forall X5.(v7\_ordinal1\ X5)\Rightarrow(\forall X6.(v7\_ordinal1\ X6)\Rightarrow((k4\_tarski\ X5\ X6 \in k2\_matrix\_1\ X3)\Rightarrow(k3\_matrix\_1\ X2\ X3\ X5\ X6 = k3\_matrix\_1\ X2\ X4\ X5\ X6))))\Rightarrow(X3 = X4)))))) \tag{3}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ X1\ X0\ X0)\Rightarrow((k3\_finseq\_1\ X2 = X0)\wedge((k1\_matrix\_1\ X2 = X0)\wedge(k2\_matrix\_1\ X2 = k2\_zfmisc\_1\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1\ X0)))))) \tag{4}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow((X0 \in k2\_finseq\_1\ X1)\Leftrightarrow((r1\_xxreal\_0\ np\_\_1\ X0)\wedge(r1\_xxreal\_0\ X0\ X1)))) \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0) \Rightarrow ((l2\_algstr\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0) \Rightarrow (l1\_struct\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0) \Rightarrow ((l2\_struct\_0\ X0) \wedge (l1\_algstr\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((\neg v6\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v33\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge ((v5\_group\_1\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge ((v5\_vectsp\_1\ X0) \wedge (l6\_algstr\_0\ X0))))))))))) \wedge ((m1\_subset\_1\ X1\ k5\_numbers) \wedge (v7\_ordinal1\ X2))) \Rightarrow (m1\_matrix\_1\ (k4\_matrix14\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)\ X1\ X1) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v6\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v33\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge ((v5\_group\_1\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge ((v5\_vectsp\_1\ X0) \wedge (l6\_algstr\_0\ X0))))))))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (k4\_matrix14\ X0\ X1\ X2 = k2\_finseq\_7\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))\ (k12\_matrix\_1\ X0\ X1)\ np\_\_1\ X2))) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1) \Rightarrow (v7\_ordinal1\ X0) \tag{13}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X0)\ X1\ X1)\Rightarrow(((r1\_xxreal\_0\ np\_\_1\ X2)\wedge((r1\_xxreal\_0\ X2\ X1)\wedge(\forall X4.(v7\_ordinal1\ X4)\Rightarrow(\forall X5.(v7\_ordinal1\ X5)\Rightarrow(((r1\_xxreal\_0\ np\_\_1\ X4)\wedge((r1\_xxreal\_0\ X4\ X1)\wedge((r1\_xxreal\_0\ np\_\_1\ X5)\wedge(r1\_xxreal\_0\ X5\ X1))))\Rightarrow((((X4 = np\_\_1)\wedge(X5 = X2))\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k5\_struct\_0\ X0))\wedge((((X4 = X2)\wedge(X5 = np\_\_1))\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k5\_struct\_0\ X0))\wedge((((X4 = np\_\_1)\wedge(X5 = np\_\_1))\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k4\_struct\_0\ X0))\wedge((((X4 = X2)\wedge(X5 = X2))\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k4\_struct\_0\ X0))\wedge((\neg((X4 = np\_\_1)\vee(X4 = X2))\wedge((X5 = np\_\_1)\vee(X5 = X2)))\Rightarrow(((X4 = X5)\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k5\_struct\_0\ X0))\wedge((X4 \neq X5)\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k4\_struct\_0\ X0))))))))))))\Rightarrow((X2 = np\_\_1)\vee(X3 = k4\_matrix14\ X0\ X1\ X2))))))$$