

## t44\_matrix14

(TMWFdF9kp5YP4kKQHyoRuh33gj41qydp8P2)

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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  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_matrix14 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_finseq\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k13\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_matrix\_1 : \iota \Rightarrow o$  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  $k12\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\ & \quad (v7\_ordinal1 X2) \Rightarrow (\forall X3.(v7\_ordinal1 X3) \Rightarrow (\forall X4. ( \\ & \quad \neg v1\_xboole\_0 X4) \Rightarrow (\forall X5.(m1\_matrix\_1 X5 X4 X0 X1) \Rightarrow (((r1\_xxreal\_0 \\ & \quad np\_1 X2) \wedge ((r1\_xxreal\_0 X2 X0) \wedge ((r1\_xxreal\_0 np\_1 X3) \wedge (r1\_xxreal\_0 \\ & \quad X3 X1)))))) \Rightarrow (k4\_tarski X2 X3 \in k2\_matrix\_1 X5)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 X0) \Rightarrow \\ & \quad (\forall X2.(v7\_ordinal1 X2) \Rightarrow (k2\_finseq\_7 X0 X1 X2 X2 = X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0. k3\_finseq\_2 X0 = k13\_finseq\_1 X0 \quad (5)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0. \neg v1\_xboole\_0 (k13\_finseq\_1 X0) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((v7\_ordinal1 X1) \wedge (v7\_ordinal1 X2))) \Rightarrow (\forall X3. (m1\_matrix\_1 X3 X0 X1 X2) \Rightarrow ((v1\_matrix\_1 X3) \wedge (m2\_finseq\_1 X3 (k3\_finseq\_2 X0)))) \quad (8)$$

Assume the following.

$$\forall X0. (l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0. (l2\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (10)$$

Assume the following.

$$\forall X0. (l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \wedge (v7\_ordinal1 X1)) \Rightarrow (m1\_matrix\_1 (k12\_matrix\_1 X0 X1) (u1\_struct\_0 X0) X1 X1) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k5\_numbers) \Rightarrow (\forall X2. (v7\_ordinal1 X2) \Rightarrow (k4\_matrix14 X0 X1 X2 = k2\_finseq\_7 (k3\_finseq\_2 (u1\_struct\_0 X0)) (k12\_matrix\_1 X0 X1) np\_1 X2))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\
& (v7\_ordinal1 X1) \Rightarrow (\forall X2.(m1\_matrix\_1 X2 (u1\_struct\_0 X0) \\
& X1 X1) \Rightarrow ((X2 = k12\_matrix\_1 X0 X1) \Leftrightarrow ((\forall X3.(v7\_ordinal1 X3) \Rightarrow \\
& ((k4\_tarski X3 X3 \in k2\_matrix\_1 X2) \Rightarrow (k3\_matrix\_1 (u1\_struct\_0 \\
& X0) X2 X3 X3 = k5\_struct\_0 X0))) \wedge (\forall X3.(v7\_ordinal1 X3) \Rightarrow ( \\
& \forall X4.(v7\_ordinal1 X4) \Rightarrow ((k4\_tarski X3 X4 \in k2\_matrix\_1 X2) \Rightarrow \\
& ((X3 = X4) \vee (k3\_matrix\_1 (u1\_struct\_0 X0) X2 X3 X4 = k4\_struct\_0 X0)))))))))) \\
& \hspace{15em} (14)
\end{aligned}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (15)$$

**Theorem 1**

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