

# t9\_matrix\_1

## (TMNJ8rzzfZhnBcncF4cgCFveZpqHZiusjfZw)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $v1\_matrix\_1 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k13\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (1)$$

Assume the following.

$$\forall X0. k3\_finseq\_2 X0 = k13\_finseq\_1 X0 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge ((v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \Rightarrow ((m1\_finseq\_1 X1 X0) \Leftrightarrow (r1\_tarski (k10\_xtuple\_0 X1) X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ ((v1\_matrix\_1 X0) \Leftrightarrow (\exists X1.(v7\_ordinal1 X1) \wedge (\forall X2. \\ \neg(X2 \in k10\_xtuple\_0 X0) \wedge (\forall X3.((v1\_relat\_1 X3) \wedge ((v1\_funct\_1 \\ X3) \wedge (v1\_finseq\_1 X3)))) \Rightarrow (\neg(X3 = X2) \wedge (k3\_finseq\_1 X3 = X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k13\_finseq\_1 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (m2\_finseq\_1 X2 X0)) \quad (8)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ( \\ (v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \Rightarrow (((v1\_matrix\_1 X1) \wedge (m2\_finseq\_1 \\ X1 (k3\_finseq\_2 X0))) \Leftrightarrow (\exists X2.(v7\_ordinal1 X2) \wedge (\forall X3. \\ \neg(X3 \in k10\_xtuple\_0 X1) \wedge (\forall X4.(m2\_finseq\_1 X4 X0) \Rightarrow (\neg(X3 = \\ X4) \wedge (k3\_finseq\_1 X4 = X2)))))))) \end{aligned}$$