

# t29\_matrix\_1 (TMdnZMK- WkebpBfEuN6FW8X7aFBJB8hm2LFn)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k11\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  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. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X1 \in X0) \Rightarrow (k1\_funct\_1 (k2\_funcop\_1 X0 X2) X1 = X2) \quad (2)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow (\forall X2. (m1\_matrix\_1 X2 X1 X0 X0) \Rightarrow ((k3\_finseq\_1 X2 = X0) \wedge ((k1\_matrix\_1 X2 = X0) \wedge (k2\_matrix\_1 X2 = k2\_zfmisc\_1 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0)))))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_2 X1 X0) \Rightarrow (\forall X2. (m2\_finseq\_2 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Leftrightarrow(m1\_finseq\_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k7\_funcop\_1 X0 X1 = k2\_funcop\_1 X0 X1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((v7\_ordinal1 X1)\wedge(m1\_subset\_1 X2 X0)))\Rightarrow(k5\_finseq\_2 X0 X1 X2 = k2\_finseq\_2 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(\neg v1\_xboole\_0 X1))\Rightarrow(\neg v1\_xboole\_0 (k4\_finseq\_2 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\Rightarrow(\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((v7\_ordinal1 X1)\wedge(v7\_ordinal1 X2)))\Rightarrow(\forall X3.(m1\_matrix\_1 X3 X0 X1 X2)\Rightarrow((v1\_matrix\_1 X3)\wedge(m2\_finseq\_1 X3 (k3\_finseq\_2 X0)))) \quad (10)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0)\Rightarrow((l2\_algstr\_0 X0)\wedge(l5\_algstr\_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0)\Rightarrow((l2\_struct\_0 X0)\wedge(l1\_algstr\_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(l1\_algstr\_0 X0)\Rightarrow(l1\_struct\_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((v7\_ordinal1 X1)\wedge(m1\_subset\_1 X2 X0)))\Rightarrow(m2\_finseq\_2 (k5\_finseq\_2 X0 X1 X2) X0 (k4\_finseq\_2 X1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(l2\_struct\_0 X0)\Rightarrow(m1\_subset\_1 (k4\_struct\_0 X0) (u1\_struct\_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k4\_finseq\_2\ X0\ X1)\ X1) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_matrix\_1\ X1)\wedge(m1\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\wedge((v7\_ordinal1\ X2)\wedge(v7\_ordinal1\ X3)))\Rightarrow(m1\_subset\_1\ (k3\_matrix\_1\ X0\ X1\ X2\ X3)\ X0) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\wedge(v7\_ordinal1\ X1))\Rightarrow(m1\_matrix\_1\ (k11\_matrix\_1\ X0\ X1)\ (u1\_struct\_0\ X0)\ X1\ X1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((k4\_tarski\ X2\ X3\ \in\ k2\_matrix\_1\ X1)\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ X0)\Rightarrow((X4 = k3\_matrix\_1\ X0\ X1\ X2\ X3)\Leftrightarrow(\exists X5.(m2\_finseq\_1\ X5\ X0)\wedge((X5 = k1\_funct\_1\ X1\ X2)\wedge(X4 = k1\_funct\_1\ X5\ X3)))))))) \quad (19)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.k2\_finseq\_2\ X0\ X1 = k7\_funcop\_1\ (k2\_finseq\_1\ X0)\ X1) \quad (20)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(k11\_matrix\_1\ X0\ X1 = k5\_finseq\_2\ (k4\_finseq\_2\ X1\ (u1\_struct\_0\ X0))\ X1\ (k5\_finseq\_2\ (u1\_struct\_0\ X0)\ X1\ (k4\_struct\_0\ X0)))) \quad (21)$$

**Theorem 1**

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