

# t91\_matrixr2 (TMHad- BCXn1gjDojSLnpRphyxWqnQDXcAcg1)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v1\_matrixr2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k12\_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_matrixr2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_matrix\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k2\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\ & X1 k1\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_1 X2 k1\_numbers) \Rightarrow (\forall X3. \\ & (m1\_matrix\_1 X3 k1\_numbers X0 X0) \Rightarrow (((v1\_matrixr2 X3 X0) \wedge ((k3\_finseq\_1 \\ & X1 = X0) \wedge (k3\_finseq\_1 X2 = X0))) \Rightarrow ((k12\_matrixr1 X3 X1 = X2) \Leftrightarrow (X1 = \\ & k12\_matrixr1 (k7\_matrixr2 X0 X3) X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 k1\_numbers) \Rightarrow (\forall X1.((v1\_matrix\_1 \\ & X1) \wedge (m2\_finseq\_1 X1 (k3\_finseq\_2 k1\_numbers))) \Rightarrow ((k3\_finseq\_1 \\ & X1 = k3\_finseq\_1 X0) \Rightarrow (k3\_finseq\_1 (k12\_matrixr1 X1 X0) = k1\_matrix\_1 \\ & X1))) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (6)$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \quad (7)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(m1\_matrix\_1 \\ X1\ k1\_numbers\ X0\ X0))\Rightarrow(m1\_matrix\_1\ (k7\_matrixr2\ X0\ X1)\ k1\_numbers \\ X0\ X0) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1\_matrix\_1\ X0)\wedge(m1\_finseq\_1\ X0\ (k3\_finseq\_2 \\ k1\_numbers)))\wedge(m1\_finseq\_1\ X1\ k1\_numbers))\Rightarrow(m2\_finseq\_1\ (k12\_matrixr1 \\ X0\ X1)\ k1\_numbers) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow \\ (v7\_ordinal1\ X1)) \quad (11)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.(m1\_matrix\_1 \\ X1\ k1\_numbers\ X0\ X0)\Rightarrow((v1\_matrixr2\ X1\ X0)\Rightarrow(\forall X2.(m2\_finseq\_1 \\ X2\ k1\_numbers)\Rightarrow(\neg(k3\_finseq\_1\ X2 = X0)\wedge(\forall X3.(m2\_finseq\_1 \\ X3\ k1\_numbers)\Rightarrow(\neg(k3\_finseq\_1\ X3 = X0)\wedge(k12\_matrixr1\ X1\ X3 = X2))))))) \end{aligned}$$