

t65\_matrixr2  
(TMdW6iPMLp8b7KtUuqBfdyAMEwkFpcKsFKt)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k3\_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  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  $k1\_numbers : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $m1\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $v6\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k2\_vectsp\_1 : \iota$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v33\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v36\_algstr\_0 : \iota \Rightarrow o$  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  $v3\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v6\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  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  $k2\_matrixr1 : \iota \Rightarrow \iota$  be given. Let  $k1\_matrixr1 : \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\
& ((v1\_matrix\_1 X2) \wedge (m2\_finseq\_1 X2 (k3\_finseq\_2 k1\_numbers))) \Rightarrow \\
& (((k3\_finseq\_1 X2 = X0) \wedge (k1\_matrix\_1 X2 = X1)) \Rightarrow ((r1\_xxreal\_0 X0 \\
& k6\_numbers) \vee ((k3\_matrixr1 X2 (k8\_matrixr1 X0 X1) = X2) \wedge (k3\_matrixr1 \\
& (k8\_matrixr1 X0 X1) X2 = X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2. \\ & (\neg v1\_xboole\_0\ X2) \Rightarrow ((\neg r1\_xxreal\_0\ X0\ k1\_xboole\_0) \Rightarrow (\forall X3. \\ & (m1\_matrix\_1\ X3\ X2\ X0\ X1) \Rightarrow ((k3\_finseq\_1\ X3 = X0) \wedge ((k1\_matrix\_1 \\ & X3 = X1) \wedge (k2\_matrix\_1\ X3 = k2\_zfmisc\_1\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1 \\ & X1)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \quad (3)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (4)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & (\neg v6\_struct\_0\ k2\_vectsp\_1) \wedge ((v13\_algstr\_0\ k2\_vectsp\_1) \wedge (( \\ & v33\_algstr\_0\ k2\_vectsp\_1) \wedge ((v36\_algstr\_0\ k2\_vectsp\_1) \wedge ((v2\_rlvect\_1 \\ & k2\_vectsp\_1) \wedge ((v3\_rlvect\_1\ k2\_vectsp\_1) \wedge ((v4\_rlvect\_1\ k2\_vectsp\_1) \wedge \\ & ((v3\_group\_1\ k2\_vectsp\_1) \wedge ((v5\_group\_1\ k2\_vectsp\_1) \wedge ((v3\_vectsp\_1 \\ & k2\_vectsp\_1) \wedge ((v5\_vectsp\_1\ k2\_vectsp\_1) \wedge (v6\_vectsp\_1\ k2\_vectsp\_1)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$(v36\_algstr\_0\ k2\_vectsp\_1) \wedge (v4\_vectsp\_1\ k2\_vectsp\_1) \quad (7)$$

Assume the following.

$$(\neg v2\_struct\_0\ k2\_vectsp\_1) \wedge (v36\_algstr\_0\ k2\_vectsp\_1) \quad (8)$$

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.

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

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow ( \\ (v1\_matrix\_1 (k8\_matrixr1 X0 X1)) \wedge (m2\_finseq\_1 (k8\_matrixr1 \\ X0 X1) (k3\_finseq\_2 k1\_numbers))) \end{aligned} \quad (14)$$

Assume the following.

$$(v36\_algstr\_0 k2\_vectsp\_1) \wedge (l6\_algstr\_0 k2\_vectsp\_1) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_matrix\_1 X0) \wedge (m1\_finseq\_1 X0 (k3\_finseq\_2 (u1\_struct\_0 \\ k2\_vectsp\_1)))) \Rightarrow ((v1\_matrix\_1 (k2\_matrixr1 X0)) \wedge (m2\_finseq\_1 \\ (k2\_matrixr1 X0) (k3\_finseq\_2 k1\_numbers))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_matrix\_1 X0) \wedge (m1\_finseq\_1 X0 (k3\_finseq\_2 k1\_numbers))) \Rightarrow \\ ((v1\_matrix\_1 (k1\_matrixr1 X0)) \wedge (m2\_finseq\_1 (k1\_matrixr1 X0) \\ (k3\_finseq\_2 (u1\_struct\_0 k2\_vectsp\_1)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 \\ X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge \\ ((v5\_group\_1 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 \\ X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \wedge \\ ((v7\_ordinal1 X1) \wedge (v7\_ordinal1 X2))) \Rightarrow (m1\_matrix\_1 (k1\_matrix\_3 \\ X0 X1 X2) (u1\_struct\_0 X0) X1 X2) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (k8\_matrixr1 \\ X0 X1 = k2\_matrixr1 (k1\_matrix\_3 k2\_vectsp\_1 X0 X1))) \quad (19)$$

Assume the following.

$$\forall X0.((v1\_matrix\_1 X0) \wedge (m2\_finseq\_1 X0 (k3\_finseq\_2 (u1\_struct\_0 \\ k2\_vectsp\_1)))) \Rightarrow (k2\_matrixr1 X0 = X0) \quad (20)$$

Assume the following.

$$\forall X0.((v1\_matrix\_1 X0) \wedge (m2\_finseq\_1 X0 (k3\_finseq\_2 k1\_numbers))) \Rightarrow (k1\_matrixr1 X0 = X0) \quad (21)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (22)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow ((\neg r1\_xreal\_0 X0 k6\_numbers) \Rightarrow (k3\_matrixr1 (k8\_matrixr1 X0 X1) (k8\_matrixr1 X0 X1) = k8\_matrixr1 X0 X1)))$$