t39_matrixr1 (TMcnpfSXqH5ZdVjSQopX75zR69RRiztaWVT)

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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 $k5\_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ 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 $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_matrix\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_matrix\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_vectsp\_1 : \iota$ be given. Let $v36\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v6\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $k1\_matrixr1 : \iota \Rightarrow \iota$ be given. Let $g6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k33\_binop\_2 : \iota$ be given. Let $k35\_binop\_2 : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k2\_matrixr1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0) \wedge (m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers))) \Rightarrow (\forall X1.((v1\_matrix\_1\ X1) \wedge (m2\_finseq\_1\ X1\ (k3\_finseq\_2\ k1\_numbers))) \Rightarrow (((k3\_finseq\_1\ X0 = k3\_finseq\_1\ X1) \wedge ((k1\_matrix\_1\ X0 = k1\_matrix\_1\ X1) \wedge (X0 = k3\_matrixr1\ X0\ X1))) \Rightarrow (X1 = k8\_matrixr1\ (k3\_finseq\_1\ X0)\ (k1\_matrix\_1\ X0)))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))\Rightarrow(\forall X2.((v1\_matrix\_1\ X2)\wedge(m2\_finseq\_1\ X2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))\Rightarrow(((k3\_finseq\_1\ X1 = k3\_finseq\_1\ X2)\wedge(k1\_matrix\_1\ X1 = k1\_matrix\_1\ X2))\Rightarrow(X1 = k3\_matrix\_3\ X0\ (k1\_matrix\_4\ X0\ X1\ X2)\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{3}$$

Assume the following.

$$(\neg v6\_struct\_0\ k2\_vectsp\_1)\wedge((v13\_algstr\_0\ k2\_vectsp\_1)\wedge((v33\_algstr\_0\ k2\_vectsp\_1)\wedge((v36\_algstr\_0\ k2\_vectsp\_1)\wedge((v2\_rlvect\_1\ k2\_vectsp\_1)\wedge((v3\_rlvect\_1\ k2\_vectsp\_1)\wedge((v4\_rlvect\_1\ k2\_vectsp\_1)\wedge((v3\_group\_1\ k2\_vectsp\_1)\wedge((v5\_group\_1\ k2\_vectsp\_1)\wedge((v3\_vectsp\_1\ k2\_vectsp\_1)\wedge((v5\_vectsp\_1\ k2\_vectsp\_1)\wedge(v6\_vectsp\_1\ k2\_vectsp\_1))))))))))) \tag{4}$$

Assume the following.

$$(v36\_algstr\_0\ k2\_vectsp\_1)\wedge(v4\_vectsp\_1\ k2\_vectsp\_1) \tag{5}$$

Assume the following.

$$(\neg v2\_struct\_0\ k2\_vectsp\_1)\wedge(v36\_algstr\_0\ k2\_vectsp\_1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\wedge(((v1\_matrix\_1\ X1)\wedge(m1\_finseq\_1\ X1\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))\wedge((v1\_matrix\_1\ X2)\wedge(m1\_finseq\_1\ X2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))))\Rightarrow((v1\_matrix\_1\ (k3\_matrix\_3\ X0\ X1\ X2))\wedge(m2\_finseq\_1\ (k3\_matrix\_3\ X0\ X1\ X2)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))) \tag{7}$$

Assume the following.

$$(v36\_algstr\_0\ k2\_vectsp\_1)\wedge(l6\_algstr\_0\ k2\_vectsp\_1) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m1\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow((v1\_matrix\_1\ (k1\_matrixr1\ X0))\wedge(m2\_finseq\_1\ (k1\_matrixr1\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ k2\_vectsp\_1)))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\wedge(((v1\_matrix\_1\ X1)\wedge(m1\_finseq\_1\ X1\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))\wedge((v1\_matrix\_1\ X2)\wedge(m1\_finseq\_1\ X2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))))\Rightarrow((v1\_matrix\_1\ (k1\_matrix\_4\ X0\ X1\ X2))\wedge(m2\_finseq\_1\ (k1\_matrix\_4\ X0\ X1\ X2)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))) \tag{10}$$

Assume the following.

$$k2\_vectsp\_1 = g6\_algstr\_0\ k1\_numbers\ k33\_binop\_2\ k35\_binop\_2\ np\_\_1\ k6\_numbers \tag{11}$$

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow(k5\_matrixr1\ X0\ X1 = k2\_matrixr1\ (k1\_matrix\_4\ k2\_vectsp\_1\ (k1\_matrixr1\ X0)\ (k1\_matrixr1\ X1)))) \tag{12}$$

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow(k3\_matrixr1\ X0\ X1 = k2\_matrixr1\ (k3\_matrix\_3\ k2\_vectsp\_1\ (k1\_matrixr1\ X0)\ (k1\_matrixr1\ X1)))) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m2\_finseq\_1\ X0\ (k3\_finseq\_2\ (u1\_struct\_0\ k2\_vectsp\_1))))\Rightarrow(k2\_matrixr1\ X0 = X0) \tag{14}$$

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow(k1\_matrixr1\ X0 = X0) \tag{15}$$

Theorem 1

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow(((k3\_finseq\_1\ X0 = k3\_finseq\_1\ X1)\wedge((k1\_matrix\_1\ X0 = k1\_matrix\_1\ X1)\wedge(k5\_matrixr1\ X1\ X0 = X1)))\Rightarrow(X0 = k8\_matrixr1\ (k3\_finseq\_1\ X0)\ (k1\_matrix\_1\ X0))))$$