

## t58\_matrix\_8

(TMbzksrxa4KmJgU2gVr1PWyEPx8rr6meDPi)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  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  $m1\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_matrix\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\
 & ((\neg v2\_struct\_0 X2) \wedge ((\neg v6\_struct\_0 X2) \wedge (v13\_algstr\_0 X2) \wedge \\
 & (v33\_algstr\_0 X2) \wedge (v3\_group\_1 X2) \wedge (v5\_group\_1 X2) \wedge (v2\_rlvect\_1 \\
 & X2) \wedge (v3\_rlvect\_1 X2) \wedge (v4\_rlvect\_1 X2) \wedge (v4\_vectsp\_1 X2) \wedge \\
 & ((v5\_vectsp\_1 X2) \wedge (l6\_algstr\_0 X2)))))) \Rightarrow (\forall X3. \\
 & (m1\_matrix\_1 X3 (u1\_struct\_0 X2) X0 X1) \Rightarrow (k3\_matrix\_3 X2 X3 (k2\_matrix\_3 \\
 & X2 X3) = k1\_matrix\_3 X2 X0 X1)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\
 & ((\neg v6\_struct\_0 X1) \wedge (v13\_algstr\_0 X1) \wedge (v33\_algstr\_0 X1) \wedge \\
 & (v3\_group\_1 X1) \wedge (v5\_group\_1 X1) \wedge (v2\_rlvect\_1 X1) \wedge (v3\_rlvect\_1 \\
 & X1) \wedge (v4\_rlvect\_1 X1) \wedge (v4\_vectsp\_1 X1) \wedge (v5\_vectsp\_1 X1) \wedge \\
 & (l6\_algstr\_0 X1)))))) \Rightarrow (k1\_matrix\_8 X0 X1 (k11\_matrix\_1 \\
 & X1 X0) = k4\_struct\_0 X1)
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7\_ordinal1\ X0)\wedge \\ & (((\neg v2\_struct\_0\ X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge \\ & ((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1 \\ & X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge \\ & ((v5\_vectsp\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))))\wedge((m1\_matrix\_1 \\ & X2\ (u1\_struct\_0\ X1)\ X0\ X0)\wedge(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X1)\ X0\ X0)))\Rightarrow \\ & (k2\_matrix\_6\ X0\ X1\ X2\ X3 = k3\_matrix\_3\ X1\ X2\ X3) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0)\wedge(((\neg v2\_struct\_0 \\ & X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge \\ & ((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1 \\ & X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge \\ & (l6\_algstr\_0\ X1))))))))))\wedge(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1) \\ & X0\ X0)))\Rightarrow(k1\_matrix\_6\ X0\ X1\ X2 = k2\_matrix\_3\ X1\ X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0)\wedge(((\neg v2\_struct\_0 \\ & X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge \\ & ((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1 \\ & X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge \\ & (l6\_algstr\_0\ X1))))))))))\wedge(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1) \\ & X0\ X0)))\Rightarrow(m1\_matrix\_1\ (k1\_matrix\_6\ X0\ X1\ X2)\ (u1\_struct\_0\ X1)\ X0 \\ & X0) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0 \\ & X0)\wedge((v33\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge( \\ & (v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1 \\ & X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Rightarrow(\forall X1. \\ & (v7\_ordinal1\ X1)\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(k1\_matrix\_3 \\ & X0\ X1\ X2 = k5\_finseq\_2\ (k4\_finseq\_2\ X2\ (u1\_struct\_0\ X0))\ X1\ (k5\_finseq\_2 \\ & (u1\_struct\_0\ X0)\ X2\ (k4\_struct\_0\ X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow(\forall X1. \\ & (v7\_ordinal1\ X1)\Rightarrow(k11\_matrix\_1\ X0\ X1 = k5\_finseq\_2\ (k4\_finseq\_2 \\ & X1\ (u1\_struct\_0\ X0))\ X1\ (k5\_finseq\_2\ (u1\_struct\_0\ X0)\ X1\ (k4\_struct\_0 \\ & X0)))) \end{aligned} \quad (7)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge \\ ((\neg v6\_struct\_0\ X1) \wedge (v13\_algstr\_0\ X1) \wedge (v33\_algstr\_0\ X1) \wedge \\ (v3\_group\_1\ X1) \wedge (v5\_group\_1\ X1) \wedge (v2\_rlvect\_1\ X1) \wedge (v3\_rlvect\_1 \\ X1) \wedge (v4\_rlvect\_1\ X1) \wedge (v4\_vectsp\_1\ X1) \wedge (v5\_vectsp\_1\ X1) \wedge \\ (l6\_algstr\_0\ X1)))))) \Rightarrow (\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0 \\ X1)\ X0\ X0) \Rightarrow (k1\_matrix\_8\ X0\ X1\ (k2\_matrix\_6\ X0\ X1\ X2\ (k1\_matrix\_6 \\ X0\ X1\ X2)) = k4\_struct\_0\ X1)) \end{aligned}$$