t10_matrix_8 (TMYfG7mcGAeYiYFDUyRRQgZtWYcMKWu2MSX)

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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 $v1\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_matrix\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_matrix\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((\neg v6\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v33\_algstr\_0\ X1) \wedge ((v3\_group\_1\ X1) \wedge ((v5\_group\_1\ X1) \wedge ((v2\_rlvect\_1\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge ((v4\_vectsp\_1\ X1) \wedge ((v5\_vectsp\_1\ X1) \wedge (l6\_algstr\_0\ X1))))))))))) \Rightarrow (\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0) \Rightarrow (((v1\_matrix\_6\ X2\ X0\ X1) \wedge (v1\_matrix\_8\ X2\ X0\ X1)) \Rightarrow (v1\_matrix\_8\ (k5\_matrix\_6\ X0\ X1\ X2)\ X0\ X1))))) \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow(\forall X4.(m1\_matrix\_1\ X4\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow(((v1\_matrix\_6\ X2\ X0\ X1)\wedge((v1\_matrix\_6\ X3\ X0\ X1)\wedge(v1\_matrix\_6\ X4\ X0\ X1)))\Rightarrow((v1\_matrix\_6\ (k4\_matrix\_6\ X0\ X1\ (k4\_matrix\_6\ X0\ X1\ X2\ X3)\ X4)\ X0\ X1)\wedge(k5\_matrix\_6\ X0\ X1\ (k4\_matrix\_6\ X0\ X1\ (k4\_matrix\_6\ X0\ X1\ X2\ X3)\ X4) = k4\_matrix\_6\ X0\ X1\ (k4\_matrix\_6\ X0\ X1\ (k5\_matrix\_6\ X0\ X1\ X4)\ (k5\_matrix\_6\ X0\ X1\ X3))\ (k5\_matrix\_6\ X0\ X1\ X2)))))))) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow(k4\_matrix\_3\ X1\ (k12\_matrix\_1\ X1\ X0)\ X2 = X2))) \tag{3}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow((v1\_matrix\_6\ X2\ X0\ X1)\Rightarrow((v1\_matrix\_6\ (k5\_matrix\_6\ X0\ X1\ X2)\ X0\ X1)\wedge(k5\_matrix\_6\ X0\ X1\ (k5\_matrix\_6\ X0\ X1\ X2) = X2))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v7\_ordinal1\ X0)\wedge(((\neg v2\_struct\_0\ X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))))))\wedge((m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\wedge(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X1)\ X0\ X0))))\Rightarrow((r2\_matrix\_6\ X0\ X1\ X2\ X3)\Rightarrow(r2\_matrix\_6\ X0\ X1\ X3\ X2)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v7\_ordinal1\ X0)\wedge (((\neg v2\_struct\_0\ X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge ((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge ((v5\_vectsp\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))))))\wedge((m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\wedge(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X1)\ X0\ X0))))\Rightarrow (k4\_matrix\_6\ X0\ X1\ X2\ X3 = k4\_matrix\_3\ X1\ X2\ X3) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\wedge (v7\_ordinal1\ X1))\Rightarrow(m1\_matrix\_1\ (k12\_matrix\_1\ X0\ X1)\ (u1\_struct\_0\ X0)\ X1\ X1) \tag{7}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge ((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge (l6\_algstr\_0\ X1))))))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow((v1\_matrix\_6\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow((X3 = k5\_matrix\_6\ X0\ X1\ X2)\Leftrightarrow(r2\_matrix\_6\ X0\ X1\ X3\ X2)))))) \tag{8}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge ((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge (l6\_algstr\_0\ X1))))))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow((v1\_matrix\_6\ X2\ X0\ X1)\Leftrightarrow(\exists X3.(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X1)\ X0\ X0)\wedge(r2\_matrix\_6\ X0\ X1\ X2\ X3))))) \tag{9}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge ((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge (l6\_algstr\_0\ X1))))))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow ((r2\_matrix\_6\ X0\ X1\ X2\ X3)\Leftrightarrow((k4\_matrix\_3\ X1\ X2\ X3 = k4\_matrix\_3\ X1\ X3\ X2)\wedge(k4\_matrix\_3\ X1\ X2\ X3 = k12\_matrix\_1\ X1\ X0)))))) \tag{10}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow((v1\_matrix\_8\ X2\ X0\ X1)\Leftrightarrow(k4\_matrix\_6\ X0\ X1\ X2\ X2 = X2)))) \tag{11}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((\neg v6\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v33\_algstr\_0\ X1)\wedge((v3\_group\_1\ X1)\wedge((v5\_group\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))))))\Rightarrow(\forall X2.(m1\_matrix\_1\ X2\ (u1\_struct\_0\ X1)\ X0\ X0)\Rightarrow(((v1\_matrix\_6\ X2\ X0\ X1)\wedge(v1\_matrix\_8\ X2\ X0\ X1))\Rightarrow(X2 = k12\_matrix\_1\ X1\ X0))))$$