

## t28\_matrix16

(TMcjHnKskfAPEF8B9zHjbp6AMUPeszkaJq1)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  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  $m1\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_matrix16 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\ & X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v33\_algstr\_0 X1) \wedge \\ & ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 \\ & X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge ((v5\_vectsp\_1 X1) \wedge \\ & (l6\_algstr\_0 X1)))))))))) \Rightarrow (\forall X2.(m1\_matrix\_1 X2 (u1\_struct\_0 \\ & X1) X0 X0) \Rightarrow (\forall X3.(m1\_matrix\_1 X3 (u1\_struct\_0 X1) X0 X0) \Rightarrow \\ & (((v3\_matrix16 X2 (u1\_struct\_0 X1)) \wedge (v3\_matrix16 X3 (u1\_struct\_0 \\ & X1))) \Rightarrow (v3\_matrix16 (k3\_matrix\_6 X0 X1 X2 X3) (u1\_struct\_0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\ & X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v33\_algstr\_0 X1) \wedge \\ & ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 \\ & X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge ((v5\_vectsp\_1 X1) \wedge \\ & (l6\_algstr\_0 X1)))))))))) \Rightarrow (\forall X2.(m1\_matrix\_1 X2 (u1\_struct\_0 \\ & X1) X0 X0) \Rightarrow (\forall X3.(m1\_matrix\_1 X3 (u1\_struct\_0 X1) X0 X0) \Rightarrow \\ & (((v3\_matrix16 X2 (u1\_struct\_0 X1)) \wedge (v3\_matrix16 X3 (u1\_struct\_0 \\ & X1))) \Rightarrow (v3\_matrix16 (k2\_matrix\_6 X0 X1 X2 X3) (u1\_struct\_0 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\ & X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v33\_algstr\_0 X1) \wedge \\ & ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 \\ & X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge ((v5\_vectsp\_1 X1) \wedge \\ & (l6\_algstr\_0 X1)))))))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & X1)) \Rightarrow (\forall X3.(m1\_matrix\_1 X3 (u1\_struct\_0 X1) X0 X0) \Rightarrow ((v3\_matrix16 \\ & X3 (u1\_struct\_0 X1)) \Rightarrow (v3\_matrix16 (k2\_matrix13 X0 X0 X1 X3 X2) ( \\ & u1\_struct\_0 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7\_ordinal1 X0) \wedge \\ & (((\neg v2\_struct\_0 X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge \\ & ((v33\_algstr\_0 X1) \wedge ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v2\_rlvect\_1 \\ & X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge \\ & ((v5\_vectsp\_1 X1) \wedge (l6\_algstr\_0 X1)))))))))) \wedge ((m1\_matrix\_1 \\ & X2 (u1\_struct\_0 X1) X0 X0) \wedge (m1\_matrix\_1 X3 (u1\_struct\_0 X1) X0 X0))) \Rightarrow \\ & (m1\_matrix\_1 (k2\_matrix\_6 X0 X1 X2 X3) (u1\_struct\_0 X1) X0 X0) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v7\_ordinal1 \\ & X0) \wedge ((v7\_ordinal1 X1) \wedge (((\neg v2\_struct\_0 X2) \wedge ((\neg v6\_struct\_0 X2) \wedge \\ & ((v13\_algstr\_0 X2) \wedge ((v33\_algstr\_0 X2) \wedge ((v3\_group\_1 X2) \wedge ((v5\_group\_1 \\ & X2) \wedge ((v2\_rlvect\_1 X2) \wedge ((v3\_rlvect\_1 X2) \wedge ((v4\_rlvect\_1 X2) \wedge \\ & ((v4\_vectsp\_1 X2) \wedge ((v5\_vectsp\_1 X2) \wedge (l6\_algstr\_0 X2)))))))))) \wedge \\ & ((m1\_matrix\_1 X3 (u1\_struct\_0 X2) X0 X1) \wedge (m1\_subset\_1 X4 (u1\_struct\_0 \\ & X2)))))) \Rightarrow (m1\_matrix\_1 (k2\_matrix13 X0 X1 X2 X3 X4) (u1\_struct\_0 \\ & X2) X0 X1) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\ & X1) \wedge (\neg v6\_struct\_0 X1) \wedge (v13\_algstr\_0 X1) \wedge (v33\_algstr\_0 X1) \wedge \\ & ((v3\_group\_1 X1) \wedge (v5\_group\_1 X1) \wedge (v2\_rlvect\_1 X1) \wedge (v3\_rlvect\_1 \\ & X1) \wedge (v4\_rlvect\_1 X1) \wedge (v4\_vectsp\_1 X1) \wedge (v5\_vectsp\_1 X1) \wedge \\ & (l6\_algstr\_0 X1)))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & X1)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (\forall X4. \\ & (m1\_subset\_1 X4 (u1\_struct\_0 X1)) \Rightarrow (\forall X5.(m1\_matrix\_1 X5 \\ & (u1\_struct\_0 X1) X0 X0) \Rightarrow (\forall X6.(m1\_matrix\_1 X6 (u1\_struct\_0 \\ & X1) X0 X0) \Rightarrow (\forall X7.(m1\_matrix\_1 X7 (u1\_struct\_0 X1) X0 X0) \Rightarrow \\ & (((v3\_matrix16 X5 (u1\_struct\_0 X1)) \wedge (v3\_matrix16 X6 (u1\_struct\_0 \\ & X1)) \wedge (v3\_matrix16 X7 (u1\_struct\_0 X1)))) \Rightarrow (v3\_matrix16 (k3\_matrix\_6 \\ & X0 X1 (k2\_matrix\_6 X0 X1 (k2\_matrix13 X0 X0 X1 X5 X2) (k2\_matrix13 \\ & X0 X0 X1 X6 X3)) (k2\_matrix13 X0 X0 X1 X7 X4)) (u1\_struct\_0 X1))))))))) \end{aligned}$$