

## t23\_matrix16

(TMZex6gV2jmfAEsTAJs2uf9SmybhXZ8WAwN)

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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  $k2\_matrix\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix13 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\ & X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v33\_algstr\_0 X1) \wedge \\ & ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 \\ & X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge ((v5\_vectsp\_1 X1) \wedge \\ & (l6\_algstr\_0 X1)))))))))) \Rightarrow (\forall X2.(m1\_matrix\_1 X2 (u1\_struct\_0 \\ & X1) X0 X0) \Rightarrow (\forall X3.(m1\_matrix\_1 X3 (u1\_struct\_0 X1) X0 X0) \Rightarrow \\ & (((v3\_matrix16 X2 (u1\_struct\_0 X1)) \wedge (v3\_matrix16 X3 (u1\_struct\_0 \\ & X1))) \Rightarrow (v3\_matrix16 (k2\_matrix\_6 X0 X1 X2 X3) (u1\_struct\_0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\ & X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v33\_algstr\_0 X1) \wedge \\ & ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 \\ & X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge ((v5\_vectsp\_1 X1) \wedge \\ & (l6\_algstr\_0 X1)))))))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & X1)) \Rightarrow (\forall X3.(m1\_matrix\_1 X3 (u1\_struct\_0 X1) X0 X0) \Rightarrow ((v3\_matrix16 \\ & X3 (u1\_struct\_0 X1)) \Rightarrow (v3\_matrix16 (k2\_matrix13 X0 X0 X1 X3 X2) ( \\ & u1\_struct\_0 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v7\_ordinal1 \\
& X0) \wedge ((v7\_ordinal1 X1) \wedge ((\neg v2\_struct\_0 X2) \wedge (\neg v6\_struct\_0 X2) \wedge \\
& ((v13\_algstr\_0 X2) \wedge ((v33\_algstr\_0 X2) \wedge ((v3\_group\_1 X2) \wedge ((v5\_group\_1 \\
& X2) \wedge ((v2\_rlvect\_1 X2) \wedge ((v3\_rlvect\_1 X2) \wedge ((v4\_rlvect\_1 X2) \wedge \\
& ((v4\_vectsp\_1 X2) \wedge ((v5\_vectsp\_1 X2) \wedge (l6\_algstr\_0 X2)))))))))) \wedge \\
& ((m1\_matrix\_1 X3 (u1\_struct\_0 X2) X0 X1) \wedge (m1\_subset\_1 X4 (u1\_struct\_0 \\
& X2)))))) \Rightarrow (m1\_matrix\_1 (k2\_matrix13 X0 X1 X2 X3 X4) (u1\_struct\_0 \\
& X2) X0 X1)
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. (m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \tag{5}$$

**Theorem 1**

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