

# t33\_matrix\_7 (TMKrog- gSv7mF9DVjysg5owV4NMdpUCq2KxA)

October 27, 2020

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  $m1\_matrix\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k12\_matrix\_2 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k11\_matrix\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_finsop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u2\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_classes1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\
& X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v33\_algstr\_0 X1) \wedge \\
& ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 \\
& X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge ((v5\_vectsp\_1 X1) \wedge \\
& (l6\_algstr\_0 X1)))))))))) \Rightarrow (\forall X2.(m1\_matrix\_2 X2 (k12\_matrix\_2 \\
& X0)) \Rightarrow (\forall X3.(m2\_finseq\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (\forall X4. \\
& (m2\_finseq\_1 X4 (u1\_struct\_0 X1)) \Rightarrow (((k3\_finseq\_1 X3 = X0) \wedge (X4 = \\
& k1\_partfun1 (k2\_finseq\_1 (k11\_matrix\_2 (k12\_matrix\_2 X0))) ( \\
& k2\_finseq\_1 (k11\_matrix\_2 (k12\_matrix\_2 X0))) k5\_numbers (u1\_struct\_0 \\
& X1) X2 X3)) \Rightarrow (r2\_classes1 X3 X4))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
& X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge \\
& (v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v4\_vectsp\_1 \\
& X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m2\_finseq\_1 X2 \\
& (u1\_struct\_0 X0)) \Rightarrow ((r2\_classes1 X1 X2) \Rightarrow (k1\_finsop\_1 (u1\_struct\_0 \\
& X0) X1 (u2\_algstr\_0 X0) = k1\_finsop\_1 (u1\_struct\_0 X0) X2 (u2\_algstr\_0 \\
& X0))))))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\
& X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v33\_algstr\_0 X1) \wedge \\
& ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 \\
& X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge ((v5\_vectsp\_1 X1) \wedge \\
& (l6\_algstr\_0 X1)))))))))) \Rightarrow (\forall X2.(m1\_matrix\_2 X2 (k12\_matrix\_2 \\
& X0)) \Rightarrow (\forall X3.(m2\_finseq\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (\forall X4. \\
& (m2\_finseq\_1 X4 (u1\_struct\_0 X1)) \Rightarrow (((r1\_xxreal\_0 np\_1 X0) \wedge \\
& (k3\_finseq\_1 X3 = X0) \wedge (X4 = k1\_partfun1 (k2\_finseq\_1 (k11\_matrix\_2 \\
& (k12\_matrix\_2 X0))) (k2\_finseq\_1 (k11\_matrix\_2 (k12\_matrix\_2 \\
& X0))) k5\_numbers (u1\_struct\_0 X1) X2 X3)) \Rightarrow (k1\_finsop\_1 (u1\_struct\_0 \\
& X1) X3 (u2\_algstr\_0 X1) = k1\_finsop\_1 (u1\_struct\_0 X1) X4 (u2\_algstr\_0 \\
& X1))))))
\end{aligned}$$