

# t14\_cayley

(TMGfqhbMmQU9C54fX9xgL1zJCe9eGtdbYT2)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_group\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $r1\_group\_6 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_cayley : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_cayley : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v15\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v1\_monoid\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 \\ & X1) \wedge ((v3\_group\_1 X1) \wedge (l3\_algstr\_0 X1)))) \Rightarrow (\forall X2.((v1\_funct\_1 \\ & X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X1) (u1\_struct\_0 X0)) \wedge ((v1\_group\_6 \\ & X2 X1 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & X1) (u1\_struct\_0 X0)))))) \Rightarrow ((v2\_funct\_1 X2) \Rightarrow (r1\_group\_6 X1 ( \\ & k10\_group\_6 X1 X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow ((v1\_funct\_1 (k4\_cayley X0)) \wedge ((v2\_funct\_1 \\ & (k4\_cayley X0)) \wedge (v1\_funct\_2 (k4\_cayley X0) (u1\_struct\_0 X0) ( \\ & u1\_struct\_0 (k2\_cayley (u1\_struct\_0 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow ((v1\_funct\_1 (k4\_cayley X0)) \wedge ((v1\_funct\_2 \\ & (k4\_cayley X0) (u1\_struct\_0 X0) (u1\_struct\_0 (k2\_cayley (u1\_struct\_0 \\ & X0)))) \wedge (v1\_group\_6 (k4\_cayley X0) X0 (k2\_cayley (u1\_struct\_0 \\ & X0)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(\neg v2\_struct\_0 (k2\_cayley X0)) \wedge ((v15\_algstr\_0 (k2\_cayley X0)) \wedge ((v2\_group\_1 (k2\_cayley X0)) \wedge ((v3\_group\_1 (k2\_cayley X0)) \wedge (v1\_monoid\_0 (k2\_cayley X0)))))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow ((v1\_funct\_1 (k4\_cayley X0)) \wedge ((v1\_funct\_2 (k4\_cayley X0) (u1\_struct\_0 X0) (u1\_struct\_0 (k2\_cayley (u1\_struct\_0 X0)))) \wedge (m1\_subset\_1 (k4\_cayley X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 (k2\_cayley (u1\_struct\_0 X0)))))))))) \quad (5)$$

Assume the following.

$$\forall X0.(v15\_algstr\_0 (k2\_cayley X0)) \wedge ((v1\_monoid\_0 (k2\_cayley X0)) \wedge (l3\_algstr\_0 (k2\_cayley X0))) \quad (6)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (r1\_group\_6 X0 (k10\_group\_6 X0 (k2\_cayley (u1\_struct\_0 X0)) (k4\_cayley X0)))$$