

# t24\_polyalg1

(TMKdfXKRBrZo1s2NffvC9TaFZZFeHZ5QhC)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k1\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_polyalg1 : \iota \Rightarrow \iota$  be given. Let  $k10\_polynom3 : \iota \Rightarrow \iota$  be given. Let  $l4\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_polyalg1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l4\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l1\_polyalg1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  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  $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_normsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_polynom3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_polynom5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_polynom3 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v4\_vectsp\_1 X0) \wedge (l4\_algstr\_0 X0))) \Rightarrow (k1\_group\_1 X0 = k5\_struct\_0 X0) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0))))))) \Rightarrow ((\neg v2\_struct\_0 (k1\_polyalg1 X0)) \wedge ((v4\_vectsp\_1 (k1\_polyalg1 X0)) \wedge (v1\_polyalg1 (k1\_polyalg1 X0) X0))) \quad (2)$$

Assume the following.

$$\forall X0. (l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0. (l5\_algstr\_0 X0) \Rightarrow ((l4\_algstr\_0 X0) \wedge (l4\_struct\_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l2\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_struct\_0 X0) \Rightarrow (\forall X1.(l1\_polyalg1 X1 X0) \Rightarrow \\ ((l6\_algstr\_0 X1) \wedge (l1\_vectsp\_1 X1 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow ((\neg v2\_struct\_0 \\ (k1\_polyalg1 X0)) \wedge ((v1\_polyalg1 (k1\_polyalg1 X0) X0) \wedge (l1\_polyalg1 \\ (k1\_polyalg1 X0) X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ ((\neg v2\_struct\_0 X1) \wedge ((v1\_polyalg1 X1 X0) \wedge (l1\_polyalg1 X1 X0))) \Rightarrow \\ ((X1 = k1\_polyalg1 X0) \Leftrightarrow ((\forall X2.(X2 \in u1\_struct\_0 X1) \Leftrightarrow ((v1\_funct\_1 \\ X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 \\ X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \wedge \\ ((\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow (\forall X3.( \\ m1\_subset\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (\forall X4.((v1\_funct\_1 X4) \wedge \\ ((v1\_funct\_2 X4 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X4 \\ (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow \\ (\forall X5.((v1\_funct\_1 X5) \wedge ((v1\_funct\_2 X5 k5\_numbers (u1\_struct\_0 \\ X0)) \wedge (m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ X0)))))) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k1\_algstr\_0 X1 X2 X3 = k2\_normsp\_1 \\ X0 X4 X5)))))) \wedge ((\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow \\ (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (\forall X4.(( \\ v1\_funct\_1 X4) \wedge ((v1\_funct\_2 X4 k5\_numbers (u1\_struct\_0 X0)) \wedge \\ (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ X0)))))) \Rightarrow (\forall X5.((v1\_funct\_1 X5) \wedge ((v1\_funct\_2 X5 k5\_numbers \\ (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k6\_algstr\_0 \\ X1 X2 X3 = k11\_polynom3 X0 X4 X5)))))) \wedge ((\forall X2.(m1\_subset\_1 \\ X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ X1)) \Rightarrow (\forall X4.((v1\_funct\_1 X4) \wedge ((v1\_funct\_2 X4 k5\_numbers \\ (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow ((X3 = X4) \Rightarrow (k4\_vectsp\_1 X0 X1 \\ X2 X3 = k3\_polynom5 X0 X4 X2)))))) \wedge ((k4\_struct\_0 X1 = k9\_polynom3 \\ X0) \wedge (k5\_struct\_0 X1 = k10\_polynom3 X0)))))) \end{aligned} \quad (9)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0))))))) \Rightarrow (k1\_group\_1 (k1\_polyalg1 X0) = k10\_polynom3 X0)$$