

## t23\_polynom1

(TMJNyLF8ZuRVaH1tTsu86qSTeWoX5U61sZs)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  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  $k15\_pre\_poly : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  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  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_poly : \iota \Rightarrow o$  be given. Let  $k3\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge (l2\_struct\_0 X1)) \Rightarrow \\ & (\forall X2. ((v1\_relat\_1 X2) \wedge ((v4\_relat\_1 X2 X0) \wedge ((v1\_funct\_1 \\ & X2) \wedge ((v1\_partfun1 X2 X0) \wedge ((v4\_valued\_0 X2) \wedge (v2\_pre\_poly X2)))))) \Rightarrow \\ & (k3\_polynom1 X0 X1 (k7\_polynom1 X0 X1) X2 = k4\_struct\_0 X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge (l2\_algstr\_0 X1)) \Rightarrow \\
& (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (k15\_pre\_poly X0) \\
& (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (k15\_pre\_poly X0) (u1\_struct\_0 X1)))))) \Rightarrow (\forall X3. ((v1\_funct\_1 \\
& X3) \wedge ((v1\_funct\_2 X3 (k15\_pre\_poly X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k15\_pre\_poly X0) (u1\_struct\_0 X1)))))) \Rightarrow \\
& (\forall X4. ((v1\_funct\_1 X4) \wedge ((v1\_funct\_2 X4 (k15\_pre\_poly X0) \\
& (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (k15\_pre\_poly X0) (u1\_struct\_0 X1)))))) \Rightarrow ((\forall X5. ((v1\_relat\_1 \\
& X5) \wedge ((v4\_relat\_1 X5 X0) \wedge ((v1\_funct\_1 X5) \wedge ((v1\_partfun1 X5 X0) \wedge \\
& ((v4\_valued\_0 X5) \wedge (v2\_pre\_poly X5)))))) \Rightarrow (k3\_polynom1 X0 X1 X4 \\
& X5 = k1\_algstr\_0 X1 (k3\_polynom1 X0 X1 X2 X5) (k3\_polynom1 X0 X1 X3 \\
& X5))) \Rightarrow (r2\_funct\_2 (k15\_pre\_poly X0) (u1\_struct\_0 X1) X4 (k4\_polynom1 \\
& X0 X1 X2 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. (((v1\_funct\_1 X2) \wedge \\
& ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& X0 X1)))))) \wedge ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 X0 X1) \wedge (m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow ((r2\_funct\_2 X0 X1 X2 \\
& X3) \Leftrightarrow (X2 = X3))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. (l2\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \tag{4}$$

Assume the following.

$$\forall X0. (l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge (l2\_struct\_0 X1)) \Rightarrow \\
& ((v1\_funct\_1 (k7\_polynom1 X0 X1)) \wedge ((v1\_funct\_2 (k7\_polynom1 \\
& X0 X1) (k15\_pre\_poly X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 (k7\_polynom1 \\
& X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k15\_pre\_poly X0) (u1\_struct\_0 \\
& X1))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v2\_struct\_0 \\
& X1) \wedge (l2\_algstr\_0 X1)) \wedge (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (k15\_pre\_poly \\
& X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (k15\_pre\_poly X0) (u1\_struct\_0 X1)))))) \wedge ((v1\_funct\_1 X3) \wedge (( \\
& v1\_funct\_2 X3 (k15\_pre\_poly X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k15\_pre\_poly X0) (u1\_struct\_0 X1)))))) \Rightarrow \\
& ((v1\_funct\_1 (k4\_polynom1 X0 X1 X2 X3)) \wedge ((v1\_funct\_2 (k4\_polynom1 \\
& X0 X1 X2 X3) (k15\_pre\_poly X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 ( \\
& k4\_polynom1 X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k15\_pre\_poly \\
& X0) (u1\_struct\_0 X1))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v2\_struct\_0 \\
& X1) \wedge (l1\_struct\_0 X1)) \wedge (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (k15\_pre\_poly \\
& X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (k15\_pre\_poly X0) (u1\_struct\_0 X1)))))) \wedge ((v1\_relat\_1 X3) \wedge (( \\
& v4\_relat\_1 X3 X0) \wedge ((v1\_funct\_1 X3) \wedge ((v1\_partfun1 X3 X0) \wedge ((v4\_valued\_0 \\
& X3) \wedge (v2\_pre\_poly X3)))))) \Rightarrow (m1\_subset\_1 (k3\_polynom1 X0 X1 \\
& X2 X3) (u1\_struct\_0 X1))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0. (l2\_algstr\_0 X0) \Rightarrow ((v4\_rlvect\_1 X0) \Leftrightarrow (\forall X1. ( \\
m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k1\_algstr\_0 X0 X1 (k4\_struct\_0 \\
X0) = X1))) \tag{9}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v4\_rlvect\_1 X1) \wedge \\
& (l2\_algstr\_0 X1))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
& X2 (k15\_pre\_poly X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 (k15\_pre\_poly X0) (u1\_struct\_0 X1)))))) \Rightarrow (r2\_funct\_2 \\
& (k15\_pre\_poly X0) (u1\_struct\_0 X1) (k4\_polynom1 X0 X1 X2 (k7\_polynom1 \\
& X0 X1)) X2))
\end{aligned}$$