

# t18\_polynom2

(TMNcVQ4ehXE7eYaBjoYiRdZQ6fE43f8h7S2)

October 27, 2020

Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v7\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  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  $v1\_funct\_1 : \iota \Rightarrow o$  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  $v1\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $r3\_orders\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k17\_pre\_poly : \iota \Rightarrow \iota$  be given. Let  $k2\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  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  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v8\_relat\_2 : \iota \Rightarrow o$  be given. Let  $r6\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r4\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r8\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_orders\_1 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v6\_relat\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \Rightarrow ((r1\_relat\_2 X1 X0) \Rightarrow ((k1\_relset\_1 X0 X1 = X0) \wedge (k1\_relat\_1 X1 = X0))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge (l2\_struct\_0 X1)) \Rightarrow (\exists X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k15\_pre\_poly X0) (u1\_struct\_0 X1)))) \wedge ((v1\_relat\_1 X2) \wedge ((v4\_relat\_1 X2 (k15\_pre\_poly X0)) \wedge ((v5\_relat\_1 X2 (u1\_struct\_0 X1)) \wedge ((v1\_funct\_1 X2) \wedge ((\neg v1\_xboole\_0 X2) \wedge ((v1\_partfun1 X2 (k15\_pre\_poly X0)) \wedge ((v1\_funct\_2 X2 (k15\_pre\_poly X0) (u1\_struct\_0 X1)) \wedge (v1\_polynom1 X2 (k15\_pre\_poly X0) X1)))))))))) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X2. \\ & ((v1\_partfun1 X2 X0) \wedge ((v1\_relat\_2 X2) \wedge ((v4\_relat\_2 X2) \wedge ((v8\_relat\_2 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))))))) \Rightarrow ( \\ & (r6\_relat\_2 X2 X0) \Rightarrow (r6\_relat\_2 X2 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X2. \\ & ((v1\_partfun1 X2 X0) \wedge ((v1\_relat\_2 X2) \wedge ((v4\_relat\_2 X2) \wedge ((v8\_relat\_2 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))))))) \Rightarrow ( \\ & (r1\_relat\_2 X2 X1) \wedge ((r4\_relat\_2 X2 X1) \wedge (r8\_relat\_2 X2 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v3\_ordinal1 X0) \Rightarrow ((v1\_partfun1 (k17\_pre\_poly X0) \\ & (k15\_pre\_poly X0)) \wedge ((v1\_relat\_2 (k17\_pre\_poly X0)) \wedge ((v4\_relat\_2 \\ & (k17\_pre\_poly X0)) \wedge ((v8\_relat\_2 (k17\_pre\_poly X0)) \wedge (v3\_orders\_1 \\ & (k17\_pre\_poly X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. (l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0. (l2\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (7)$$

Assume the following.

$$\forall X0. (l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((l2\_struct\_0 \\ & X1) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 (u1\_struct\_0 X1))))))) \Rightarrow (m1\_subset\_1 \\ & (k2\_polynom1 X0 X1 X2) (k1\_zfmisc\_1 X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (m1\_subset\_1 (k1\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v3\_ordinal1 X0) \Rightarrow ((v1\_partfun1 (k17\_pre\_poly X0) \\ & (k15\_pre\_poly X0)) \wedge ((v1\_relat\_2 (k17\_pre\_poly X0)) \wedge ((v4\_relat\_2 \\ & (k17\_pre\_poly X0)) \wedge ((v8\_relat\_2 (k17\_pre\_poly X0)) \wedge (m1\_subset\_1 \\ & (k17\_pre\_poly X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k15\_pre\_poly X0) \\ & (k15\_pre\_poly X0))))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(r3\_orders\_1 X0 X1) \Leftrightarrow ((r1\_relat\_2 X0 X1) \wedge ((r8\_relat\_2 X0 X1) \wedge ((r4\_relat\_2 X0 X1) \wedge (r6\_relat\_2 X0 X1)))))) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow ((v3\_orders\_1 X0) \Leftrightarrow ((v1\_relat\_2 X0) \wedge ((v8\_relat\_2 X0) \wedge ((v4\_relat\_2 X0) \wedge (v6\_relat\_2 X0))))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow ((v1\_part\_fun1 X1 X0) \Leftrightarrow (k1\_relset\_1 X0 X1 = X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow ((v6\_relat\_2 X0) \Leftrightarrow (r6\_relat\_2 X0 (k1\_relat\_1 X0))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_xboole\_0 X0) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_xboole\_0 X2)) \quad (16)$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0) \Rightarrow ((v2\_struct\_0 X0) \Rightarrow (v7\_struct\_0 X0)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (18)$$

### Theorem 1

$$\begin{aligned} & \forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.((\neg v7\_struct\_0 X1) \wedge \\ & ((v13\_algstr\_0 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_1 \\ & X1) \wedge ((v5\_vectsp\_1 X1) \wedge (l6\_algstr\_0 X1))))))) \Rightarrow (\forall X2.( \\ & (v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (k15\_pre\_poly X0) (u1\_struct\_0 \\ & X1)) \wedge ((v1\_polynom1 X2 (k15\_pre\_poly X0) X1) \wedge (m1\_subset\_1 X2 ( \\ & k1\_zfmisc\_1 (k2\_zfmisc\_1 (k15\_pre\_poly X0) (u1\_struct\_0 X1)))))) \Rightarrow \\ & (r3\_orders\_1 (k17\_pre\_poly X0) (k2\_polynom1 (k15\_pre\_poly X0) \\ & X1 X2)))) \end{aligned}$$