

t60\_pre\_poly  
(TMdq1Ymr71k3MVNo5WZs2xSN3EBPMQvoFuo)

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Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  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  $r2\_pre\_poly : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k16\_pre\_poly : \iota \Rightarrow \iota$  be given. Let  $r3\_pre\_poly : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_partfun1 X1 X0) \wedge ((v4\_valued\_0 X1) \wedge (v2\_pre\_poly X1)))))) \Rightarrow (r3\_pre\_poly X0 (k16\_pre\_poly X0) X1) \quad (1)$$

Assume the following.

$$\forall X0. (v3\_ordinal1 X0) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_partfun1 X1 X0) \wedge ((v4\_valued\_0 X1) \wedge (v2\_pre\_poly X1)))))) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge ((v4\_relat\_1 X2 X0) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_partfun1 X2 X0) \wedge ((v4\_valued\_0 X2) \wedge (v2\_pre\_poly X2)))))) \Rightarrow ((r3\_pre\_poly X0 X1 X2) \Rightarrow (r2\_pre\_poly X0 X1 X2))) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 (k8\_funcop\_1 k5\_numbers X0 k6\_numbers)) \wedge ((v4\_relat\_1 (k8\_funcop\_1 k5\_numbers X0 k6\_numbers) X0) \wedge ((v1\_funct\_1 (k8\_funcop\_1 k5\_numbers X0 k6\_numbers)) \wedge ((v1\_partfun1 (k8\_funcop\_1 k5\_numbers X0 k6\_numbers) X0) \wedge ((v4\_valued\_0 (k8\_funcop\_1 k5\_numbers X0 k6\_numbers)) \wedge (v2\_pre\_poly (k8\_funcop\_1 k5\_numbers X0 k6\_numbers)))))) \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0. k16\_pre\_poly X0 = k8\_funcop\_1 k5\_numbers X0 k6\_numbers \quad (5)$$

**Theorem 1**

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_part\_fun1\ X1\ X0)\wedge((v4\_valued\_0\ X1)\wedge(v2\_pre\_poly\ X1))))))\Rightarrow(r2\_pre\_poly\ X0\ (k16\_pre\_poly\ X0\ X1))$$