

t61\_pre\_poly  
(TMJQhdht6xh25VCa5q2S3tQYRYwRL2WCFAP)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k18\_pre\_poly : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. ((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (r1\_xxreal\_0 X0 X0) \quad (1)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. v1\_relat\_1 (k2\_zfmisc\_1 X0 X1) \quad (3)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v2\_valued\_0 X0))) \Rightarrow (v1\_xxreal\_0 (k1\_funct\_1 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 X0 k5\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k5\_numbers))))) \Rightarrow (m1\_subset\_1 (k18\_pre\_poly X0 X1) (k1\_zfmisc\_1 (k9\_funct\_2 X0 k5\_numbers))) \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 X0 k5\_numbers) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k5\_numbers)))))) \Rightarrow \\
& (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k9\_funct\_2 X0 k5\_numbers))) \Rightarrow \\
& ((X2 = k18\_pre\_poly X0 X1) \Leftrightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge ((v4\_relat\_1 \\
& X3 X0) \wedge ((v1\_funct\_1 X3) \wedge ((v1\_partfun1 X3 X0) \wedge (v4\_valued\_0 X3)))))) \Rightarrow \\
& ((X3 \in X2) \Leftrightarrow (\forall X4. (X4 \in X0) \Rightarrow (r1\_xxreal\_0 (k1\_funct\_1 X3 X4) \\
& (k1\_funct\_1 X1 X4))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v4\_valued\_0 X0)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \tag{8}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v2\_valued\_0 X0)) \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow (\forall X2. (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v1\_funct\_2 X2 X0 X1) \Rightarrow ( \\
& v1\_partfun1 X2 X0)))
\end{aligned} \tag{10}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v5\_relat\_1 X0 k5\_numbers)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v4\_valued\_0 X0)) \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1))
\end{aligned} \tag{12}$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_relat\_1 X1)) \tag{13}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 X0 k5\_numbers) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k5\_numbers)))))) \Rightarrow \\
& (X1 \in k18\_pre\_poly X0 X1)
\end{aligned}$$