

t21\_mssubfam  
(TMGYHcWJ7ng5RjHCrk1iLt4QE2vyssr6g7n)

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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  $v2\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k1\_mboolean : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. (\neg v1\_finset\_1 X0) \Rightarrow (\neg v1\_finset\_1 (k1\_zfmisc\_1 X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v2\_finset\_1 X0))) \Rightarrow (v1\_finset\_1 (k1\_funct\_1 X0 X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 X0) \wedge \\ (v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 X0))) \Rightarrow ((v1\_relat\_1 (k1\_mboolean \\ X0 X1)) \wedge ((v2\_relat\_1 (k1\_mboolean X0 X1)) \wedge ((v4\_relat\_1 (k1\_mboolean \\ X0 X1) X0) \wedge ((v1\_funct\_1 (k1\_mboolean X0 X1)) \wedge (v1\_partfun1 (k1\_mboolean \\ X0 X1) X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (v1\_finset\_1 X0) \Rightarrow (v1\_finset\_1 (k1\_zfmisc\_1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 X0) \wedge \\ v1\_funct\_1 X1)) \Rightarrow ((v2\_finset\_1 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (v1\_finset\_1 \\ (k1\_funct\_1 X1 X2)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 X0) \wedge \\
& (v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 X0))) \Rightarrow (\forall X2. ((v1\_relat\_1 \\
& X2) \wedge ((v4\_relat\_1 X2 X0) \wedge ((v1\_funct\_1 X2) \wedge (v1\_partfun1 X2 X0)))) \Rightarrow \\
& ((X2 = k1\_mboolean X0 X1) \Leftrightarrow (\forall X3. (X3 \in X0) \Rightarrow (k1\_funct\_1 X2 X3 = \\
& k1\_zfmisc\_1 (k1\_funct\_1 X1 X3))))))
\end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 X0) \wedge \\
& (v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 X0))) \Rightarrow ((v2\_finset\_1 X1) \Leftrightarrow (v2\_finset\_1 \\
& (k1\_mboolean X0 X1)))
\end{aligned}$$