

# t69\_limfunc1

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  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  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_prob\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_seq\_2 : \iota \Rightarrow o$  be given. Let  $v8\_limfunc1 : \iota \Rightarrow o$  be given. Let  $v7\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v2\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k1\_numbers k1\_numbers)))) \Rightarrow ((\forall X1.(m1\_subset\_1 X1 k1\_numbers) \Rightarrow \\ (\exists X2.(m1\_subset\_1 X2 k1\_numbers) \wedge ((\neg r1\_xxreal\_0 X1 X2) \wedge \\ (X2 \in k1\_relset\_1 k1\_numbers X0)))) \Rightarrow ((\forall X1.(m1\_subset\_1 \\ X1 k1\_numbers) \Rightarrow (\neg (v7\_valued\_0 (k2\_partfun1 k1\_numbers k1\_numbers \\ X0 (k10\_prob\_1 X1)))) \wedge (\neg v2\_seq\_2 (k2\_partfun1 k1\_numbers k1\_numbers \\ X0 (k10\_prob\_1 X1)))))) \vee (v8\_limfunc1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1 X2) \wedge \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow (k2\_partfun1 \\ X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge (v2\_valued\_0 X0)) \Rightarrow (( \\ v1\_relat\_1 (k5\_relat\_1 X0 X1)) \wedge (v2\_valued\_0 (k5\_relat\_1 X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$v3\_membered k1\_numbers \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (v1\_relat\_1 X0) \Rightarrow (v1\_relat\_1 (k5\_relat\_1 \\ X0 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((v1\_funct\_1 \\ & (k2\_partfun1 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v3\_membered X0)\Rightarrow(v2\_membered X0) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge((v2\_valued\_0 \\ & X0)\wedge(v5\_valued\_0 X0))))\Rightarrow((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge \\ & ((v2\_valued\_0 X0)\wedge(v7\_valued\_0 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v2\_membered X1)\Rightarrow(\forall X2.(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v2\_valued\_0 X2)) \end{aligned} \quad (10)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k1\_numbers k1\_numbers))))\Rightarrow((\forall X1.(m1\_subset\_1 X1 k1\_numbers)\Rightarrow \\ & (\exists X2.(m1\_subset\_1 X2 k1\_numbers)\wedge((\neg r1\_xxreal\_0 X1 X2)\wedge \\ & (X2 \in k1\_relset\_1 k1\_numbers X0))))\Rightarrow((\forall X1.(m1\_subset\_1 \\ & X1 k1\_numbers)\Rightarrow(\neg(v5\_valued\_0 (k2\_partfun1 k1\_numbers k1\_numbers \\ & X0 (k10\_prob\_1 X1))))\wedge(\neg v2\_seq\_2 (k2\_partfun1 k1\_numbers k1\_numbers \\ & X0 (k10\_prob\_1 X1))))\vee(v8\_limfunc1 X0))) \end{aligned}$$