

t26\_limfunc2 (TMTzKU-  
vjQKxn4CYQzVdZubUT4zySR7yG8dk)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v5\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_seq\_2 : \iota \Rightarrow o$  be given. Let  $r2\_limfunc2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_valued\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.((v1\_funct\_1 \\
& X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow \\
& ((\forall X2.(m1\_subset\_1 X2 k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 \\
& X2) \wedge (\forall X3.(m1\_subset\_1 X3 k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 \\
& X3 X2) \wedge (\neg r1\_xxreal\_0 X0 X3) \wedge (X3 \in k1\_relset\_1 k1\_numbers X1)))))) \Rightarrow \\
& ((\forall X2.(m1\_subset\_1 X2 k1\_numbers) \Rightarrow (\neg(v7\_valued\_0 (k2\_partfun1 \\
& k1\_numbers k1\_numbers X1 (k2\_rcomp\_1 (k9\_real\_1 X0 X2) X0))) \wedge ( \\
& \neg v1\_seq\_2 (k2\_partfun1 k1\_numbers k1\_numbers X1 (k2\_rcomp\_1 ( \\
& k9\_real\_1 X0 X2) X0)))))) \vee (r2\_limfunc2 X1 X0)))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \tag{2}$$

Assume the following.

$$v3\_membered k1\_numbers \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1 X2) \wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow ((v1\_funct\_1 \\ & (k2\_partfun1 X0 X1 X2 X3)) \wedge (m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (v3\_membered X0) \Rightarrow (v2\_membered X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v2\_valued\_0 \\ & X0) \wedge (v5\_valued\_0 X0)))) \Rightarrow ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge \\ & ((v2\_valued\_0 X0) \wedge (v7\_valued\_0 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v2\_membered X1) \Rightarrow (\forall X2. (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v2\_valued\_0 X2)) \end{aligned} \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. (m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1. ((v1\_funct\_1 \\ & X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow \\ & ((\forall X2. (m1\_subset\_1 X2 k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 \\ & X2) \wedge (\forall X3. (m1\_subset\_1 X3 k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 \\ & X3 X2) \wedge (\neg r1\_xxreal\_0 X0 X3) \wedge (X3 \in k1\_relset\_1 k1\_numbers X1)))))) \Rightarrow \\ & ((\forall X2. (m1\_subset\_1 X2 k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 X2 \\ & k6\_numbers) \wedge ((v5\_valued\_0 (k2\_partfun1 k1\_numbers k1\_numbers \\ & X1 (k2\_rcomp\_1 (k9\_real\_1 X0 X2) X0))) \wedge (\neg v1\_seq\_2 (k2\_partfun1 \\ & k1\_numbers k1\_numbers X1 (k2\_rcomp\_1 (k9\_real\_1 X0 X2) X0)))))) \vee \\ & (r2\_limfunc2 X1 X0)))) \end{aligned}$$