

# l2\_limfunc4

(TMSsn7ntyBbAz25oXEuDe6sCPAigvg3JvhM)

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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  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k7\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow \\
& \quad (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers X0) \wedge \\
& \quad (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \Rightarrow \\
& \quad (\forall X3. ((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& \quad X0 X1)))) \Rightarrow ((r1\_tarski (k2\_relset\_1 X0 X2) (k1\_relset\_1 X0 X3)) \Rightarrow \\
& \quad (k7\_relset\_1 X0 X1 X3 (k2\_relset\_1 X0 X2) = k2\_relset\_1 X1 (k8\_funct\_2 \\
& \quad k5\_numbers X1 X0 X2 X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. (( \\
& \quad v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. (r1\_tarski X2 (k9\_xtuple\_0 \\
& \quad (k3\_relat\_1 X0 X1))) \Leftrightarrow ((r1\_tarski X2 (k9\_xtuple\_0 X0)) \wedge (r1\_tarski \\
& \quad (k7\_relat\_1 X0 X2) (k9\_xtuple\_0 X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. (m1\_subset\_1 X2 ( \\
& \quad k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (k7\_relset\_1 X0 X1 X2 X3 = k7\_relat\_1 \\
& \quad X2 X3)
\end{aligned} \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\Rightarrow(k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1\_funct\_1 X4)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1))))\wedge((v1\_funct\_1 X5)\wedge(m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X2 X3))))\Rightarrow(k1\_partfun1 X0 X1 X2 X3 X4 X5 = k3\_relat\_1 X4 X5) \end{aligned} \quad (6)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1\_funct\_1 X4)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1))))\wedge((v1\_funct\_1 X5)\wedge(m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X2 X3))))\Rightarrow((v1\_funct\_1 (k1\_partfun1 X0 X1 X2 X3 X4 X5))\wedge(m1\_subset\_1 \\ & (k1\_partfun1 X0 X1 X2 X3 X4 X5) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X3)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (10)$$

### Theorem 1

$$\begin{aligned} & \forall X0.(((v1\_funct\_1 X0)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k1\_numbers k1\_numbers))))\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge(m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))))\Rightarrow(\forall X2. \\ & ((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 k5\_numbers k1\_numbers)\wedge(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers))))\Rightarrow((r1\_tarski \\ & (k2\_relset\_1 k1\_numbers X2) (k1\_relset\_1 k1\_numbers (k1\_partfun1 \\ & k1\_numbers k1\_numbers k1\_numbers k1\_numbers X1 X0)))\Rightarrow((r1\_tarski \\ & (k2\_relset\_1 k1\_numbers X2) (k1\_relset\_1 k1\_numbers X1))\wedge(r1\_tarski \\ & (k2\_relset\_1 k1\_numbers (k8\_funct\_2 k5\_numbers k1\_numbers k1\_numbers \\ & X2 X1)) (k1\_relset\_1 k1\_numbers X0)))))) \end{aligned}$$