t35_limfunc3 (TMH2FQonjpygtncY2kcvD4vjBjAzQcHdAC8)

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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 $r1\_limfunc3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k1\_limfunc3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_rfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_real\_1 : \iota \Rightarrow \iota$ be given. Let $r4\_limfunc2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_limfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_limfunc2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_limfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $k4\_rfunct\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \Rightarrow (((r4\_limfunc2\ X1\ X0) \wedge (k8\_relset\_1\ k1\_numbers\ k1\_numbers\ X1\ (k1\_tarski\ k6\_numbers) = k1\_xboole\_0)) \Rightarrow ((k2\_limfunc2\ X1\ X0 = k6\_numbers) \vee ((r4\_limfunc2\ (k6\_rfunct\_1\ k1\_numbers\ k1\_numbers\ X1)\ X0) \wedge (k2\_limfunc2\ (k6\_rfunct\_1\ k1\_numbers\ k1\_numbers\ X1)\ X0 = k2\_real\_1\ (k2\_limfunc2\ X1\ X0))))))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \Rightarrow (((r1\_limfunc2\ X1\ X0) \wedge (k8\_relset\_1\ k1\_numbers\ k1\_numbers\ X1\ (k1\_tarski\ k6\_numbers) = k1\_xboole\_0)) \Rightarrow ((k1\_limfunc2\ X1\ X0 = k6\_numbers) \vee ((r1\_limfunc2\ (k6\_rfunct\_1\ k1\_numbers\ k1\_numbers\ X1)\ X0) \wedge (k1\_limfunc2\ (k6\_rfunct\_1\ k1\_numbers\ k1\_numbers\ X1)\ X0 = k2\_real\_1\ (k1\_limfunc2\ X1\ X0))))))) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(((r1\_limfunc2\ X1\ X0)\wedge((r4\_limfunc2\ X1\ X0)\wedge(k1\_limfunc2\ X1\ X0 = k2\_limfunc2\ X1\ X0)))\Rightarrow((r1\_limfunc3\ X1\ X0)\wedge((k1\_limfunc3\ X1\ X0 = k1\_limfunc2\ X1\ X0)\wedge(k1\_limfunc3\ X1\ X0 = k2\_limfunc2\ X1\ X0)))))) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow((r1\_limfunc3\ X1\ X0)\Rightarrow((r1\_limfunc2\ X1\ X0)\wedge((r4\_limfunc2\ X1\ X0)\wedge((k1\_limfunc2\ X1\ X0 = k2\_limfunc2\ X1\ X0)\wedge((k1\_limfunc3\ X1\ X0 = k1\_limfunc2\ X1\ X0)\wedge(k1\_limfunc3\ X1\ X0 = k2\_limfunc2\ X1\ X0))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(k8\_relset\_1\ X0\ X1\ X2\ X3 = k8\_relat\_1\ X2\ X3) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3\_membered\ X1)\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow(k6\_rfunct\_1\ X0\ X1\ X2 = k4\_rfunct\_1\ X2) \tag{6}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3\_membered\ X1)\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow((v1\_funct\_1\ (k6\_rfunct\_1\ X0\ X1\ X2))\wedge(m1\_subset\_1\ (k6\_rfunct\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{8}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(((r1\_limfunc3\ X1\ X0)\wedge(k8\_relat\_1\ X1\ (k1\_tarski\ k6\_numbers) = k1\_xboole\_0))\Rightarrow((k1\_limfunc3\ X1\ X0 = k6\_numbers)\vee((r1\_limfunc3\ (k6\_rfunct\_1\ k1\_numbers\ k1\_numbers\ X1)\ X0)\wedge(k1\_limfunc3\ (k6\_rfunct\_1\ k1\_numbers\ k1\_numbers\ X1)\ X0 = k2\_real\_1\ (k1\_limfunc3\ X1\ X0)))))$$