

l4_limfunc2

(TMH1CTYMQGzVDappRx7h8VKDDVsLZ2iZRGM)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_numbers : \iota$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X0 X2)) \Rightarrow (r1_tarski X0 (k3_xboole_0 X1 X2)) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski (k3_xboole_0 X0 X1) X0 \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k1_numbers k1_numbers)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow ((r1_tarski \\
& (k2_relset_1 k1_numbers X0) (k1_relset_1 k1_numbers (k3_valued_1 \\
& k1_numbers k1_numbers k1_numbers X1 X2))) \Rightarrow ((k1_relset_1 k1_numbers \\
& (k3_valued_1 k1_numbers k1_numbers k1_numbers X1 X2) = k9_subset_1 \\
& k1_numbers (k1_relset_1 k1_numbers X1) (k1_relset_1 k1_numbers \\
& X2)) \wedge ((r1_tarski (k2_relset_1 k1_numbers X0) (k1_relset_1 k1_numbers \\
& X1)) \wedge (r1_tarski (k2_relset_1 k1_numbers X0) (k1_relset_1 k1_numbers \\
& X2))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k1_numbers k1_numbers)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (k1_zfmisc_1 k1_numbers)) \Rightarrow ((r1_tarski (k2_relset_1 \\
& k1_numbers X0) (k9_subset_1 k1_numbers (k1_relset_1 k1_numbers \\
& (k3_valued_1 k1_numbers k1_numbers k1_numbers X1 X2)) X3)) \Rightarrow ((\\
& r1_tarski (k2_relset_1 k1_numbers X0) (k1_relset_1 k1_numbers \\
& (k3_valued_1 k1_numbers k1_numbers k1_numbers X1 X2))) \wedge ((r1_tarski \\
& (k2_relset_1 k1_numbers X0) X3) \wedge ((k1_relset_1 k1_numbers (k3_valued_1 \\
& k1_numbers k1_numbers k1_numbers X1 X2) = k9_subset_1 k1_numbers \\
& (k1_relset_1 k1_numbers X1) (k1_relset_1 k1_numbers X2)) \wedge ((r1_tarski \\
& (k2_relset_1 k1_numbers X0) (k9_subset_1 k1_numbers (k1_relset_1 \\
& k1_numbers X1) X3)) \wedge (r1_tarski (k2_relset_1 k1_numbers X0) (k9_subset_1 \\
& k1_numbers (k1_relset_1 k1_numbers X2) X3))))))
\end{aligned}$$