

t25_mesfun9c

(TMND3zDRw5HAZhsZnZvpm8ENDRwca41iU43)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. 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 $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ 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 $v1_mesfunc8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_mesfun7c : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k12_mesfun7c : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_comseq_3 : \iota \Rightarrow \iota$ be given. Let $k9_mesfun7c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k2_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k2_numbers)))))) \Rightarrow \\ & ((v1_mesfunc8 X1 X0 k2_numbers) \Leftrightarrow (v1_mesfunc8 (k11_mesfun7c X0 \\ & X1) X0 k1_numbers))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge (\\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k2_numbers)) \wedge ((v1_mesfunc8 \\ & X1 X0 k2_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & (k4_partfun1 X0 k2_numbers)))))))) \Rightarrow ((v1_funct_1 (k12_mesfun7c \\ & X0 X1)) \wedge ((v1_funct_2 (k12_mesfun7c X0 X1) k5_numbers (k4_partfun1 \\ & X0 k1_numbers)) \wedge (v1_mesfunc8 (k12_mesfun7c X0 X1) X0 k1_numbers))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k2_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k2_numbers)))))) \Rightarrow \\ & ((v1_funct_1 (k12_mesfun7c X0 X1)) \wedge ((v1_funct_2 (k12_mesfun7c \\ & X0 X1) k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 (\\ & k12_mesfun7c X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 \\ & X0 k1_numbers)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 k5_numbers (k4_partfun1 X0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 X1)))))) \Rightarrow ((v1_mesfunc8 \\ & X2 X0 X1) \Leftrightarrow (\forall X3. (v7_ordinal1 X3) \Rightarrow (\forall X4. (v7_ordinal1 \\ & X4) \Rightarrow (k1_relset_1 X0 (k4_mesfunc5 X0 X1 X2 X3) = k1_relset_1 X0 (k4_mesfunc5 \\ & X0 X1 X2 X4)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k2_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k2_numbers)))))) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k4_partfun1 \\ & X0 k1_numbers)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & (k4_partfun1 X0 k1_numbers)))))) \Rightarrow ((X2 = k12_mesfun7c X0 X1) \Leftrightarrow (\\ & \forall X3. (v7_ordinal1 X3) \Rightarrow ((k1_relset_1 X0 (k4_mesfunc5 X0 \\ & k1_numbers X2 X3) = k1_relset_1 X0 (k4_mesfunc5 X0 k2_numbers X1 \\ & X3)) \wedge (\forall X4. (m1_subset_1 X4 X0) \Rightarrow ((X4 \in k1_relset_1 X0 (k4_mesfunc5 \\ & X0 k1_numbers X2 X3)) \Rightarrow (k1_seq_1 (k4_mesfunc5 X0 k1_numbers X2 X3) \\ & X4 = k1_seq_1 (k8_comseq_3 (k9_mesfun7c X0 X1 X4) X3)))))) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k2_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k2_numbers)))))) \Rightarrow \\ & ((v1_mesfunc8 (k11_mesfun7c X0 X1) X0 k1_numbers) \Leftrightarrow (v1_mesfunc8 \\ & (k12_mesfun7c X0 X1) X0 k1_numbers)) \end{aligned}$$