

t15_mesfun9c (TMLLvu-
mUcWhSd42C3zUE9UqLtJCUoPJ7YdB)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $k1_numbers : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r2_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mesfun9c : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_numbers : \iota$ be given. Let $k4_mesfunc9 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_mesfun7c : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_mesfunc9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\ & (r2_funct_2 k5_numbers (k4_partfun1 X0 k7_numbers) (k4_mesfunc9 \\ & X0 (k1_mesfun7c X0 X1)) (k1_mesfun7c X0 (k2_mesfun9c X0 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow ((r2_mesfunc6 \\ & X0 X1 X2) \Leftrightarrow (r1_mesfunc2 X0 X1 (k1_mesfunc5 X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 k5_numbers (k4_partfun1 X0 k7_numbers)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k7_numbers)))))) \Rightarrow (\forall X3. \\
& (v7_ordinal1 X3) \Rightarrow ((\forall X4.(v7_ordinal1 X4) \Rightarrow (r1_mesfunc2 \\
& X0 X1 (k4_mesfunc5 X0 k7_numbers X2 X4))) \Rightarrow ((v2_mesfunc9 X2 X0) \wedge \\
& (r1_mesfunc2 X0 X1 (k4_mesfunc5 X0 k7_numbers (k4_mesfunc9 X0 X2) \\
& X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2) \wedge \\
& ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\
& X3) \Leftrightarrow (X2 = X3))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2) \wedge \\
& ((v1_funct_2 X2 k5_numbers (k3_rfunct_3 X0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k3_rfunct_3 X0 X1)))))) \wedge \\
& (v7_ordinal1 X3)) \Rightarrow (k4_mesfunc5 X0 X1 X2 X3 = k1_funct_1 X2 X3)
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.k3_rfunct_3 X0 X1 = k4_partfun1 X0 X1 \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge (\\
& (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k7_numbers)) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k7_numbers)))))) \Rightarrow \\
& ((v1_funct_1 (k4_mesfunc9 X0 X1)) \wedge ((v1_funct_2 (k4_mesfunc9 \\
& X0 X1) k5_numbers (k4_partfun1 X0 k7_numbers)) \wedge (m1_subset_1 (\\
& k4_mesfunc9 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 \\
& X0 k7_numbers))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2) \wedge \\
& ((v1_funct_2 X2 k5_numbers (k3_rfunct_3 X0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k3_rfunct_3 X0 X1)))))) \wedge \\
& (v7_ordinal1 X3)) \Rightarrow ((v1_funct_1 (k4_mesfunc5 X0 X1 X2 X3)) \wedge (m1_subset_1 \\
& (k4_mesfunc5 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\ & ((v1_funct_1 (k2_mesfun9c X0 X1)) \wedge ((v1_funct_2 (k2_mesfun9c \\ & X0 X1) k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 (\\ & k2_mesfun9c X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 \\ & X0 k1_numbers)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\ & ((v1_funct_1 (k1_mesfun7c X0 X1)) \wedge ((v1_funct_2 (k1_mesfun7c \\ & X0 X1) k5_numbers (k4_partfun1 X0 k7_numbers)) \wedge (m1_subset_1 (\\ & k1_mesfun7c X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 \\ & X0 k7_numbers)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\quad (11) \\ & k1_mesfunc5 X0 X1 = X1) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\ & (k1_mesfun7c X0 X1 = X1) \end{aligned} \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow (\forall X3. \\ & (v7_ordinal1 X3) \Rightarrow ((\forall X4. (v7_ordinal1 X4) \Rightarrow (r2_mesfunc6 \\ & X0 X1 (k4_mesfunc5 X0 k1_numbers X2 X4))) \Rightarrow (r2_mesfunc6 X0 X1 (k4_mesfunc5 \\ & X0 k1_numbers (k2_mesfun9c X0 X2) X3)))))) \end{aligned}$$