

t104_mesfunc6
(TMX6oRjQsPj6hF49AKUmvtxht4wbdVZXbB6)

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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 $k7_numbers : \iota$ be given. Let $v10_valued_0 : \iota \Rightarrow o$ be given. Let $v6_supinf_2 : \iota \Rightarrow o$ be given. Let $v4_measure1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_extreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_measure6 : \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\
 & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\\
 & \forall X2. (m1_subset_1 X2 k1_numbers) \Rightarrow (r2_relset_1 X0 k7_numbers \\
 & (k1_mesfunc5 X0 (k26_valued_1 X0 k1_numbers X1 X2)) (k6_mesfunc1 \\
 & X0 (k1_mesfunc5 X0 X1) X2))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k7_numbers)))) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow (\\
& \forall X5.(m2_subset_1 X5 (k1_zfmisc_1 X0) X1) \Rightarrow ((r1_mesfunc5 \\
& X0 X1 X2 X3) \Rightarrow ((r1_mesfunc5 X0 X1 X2 (k2_partfun1 X0 k7_numbers X3 \\
& X5)) \wedge (k8_mesfunc5 X0 X1 X2 (k6_mesfunc1 X0 X3 X4) X5 = k1_extreal1 \\
& (k1_measure6 X4) (k8_mesfunc5 X0 X1 X2 X3 X5)))))) \Rightarrow \\
& \hspace{15em} (2)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \\
& \hspace{15em} (3)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 \\
& X0 X1 X2 X3 = k5_relat_1 X2 X3) \\
& \hspace{15em} (4)
\end{aligned}$$

Assume the following.

$$v3_membered k1_numbers \hspace{15em} (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (((v1_relat_1 \\
& X1) \wedge ((v4_relat_1 X1 X0) \wedge ((v5_relat_1 X1 k7_numbers) \wedge (v1_funct_1 \\
& X1)))) \wedge (m1_subset_1 X2 k1_numbers))) \Rightarrow ((v1_funct_1 (k6_mesfunc1 \\
& X0 X1 X2)) \wedge (m1_subset_1 (k6_mesfunc1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k7_numbers)))) \\
& \hspace{15em} (6)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((v1_funct_1 \\
& (k2_partfun1 X0 X1 X2 X3)) \wedge (m1_subset_1 (k2_partfun1 X0 X1 X2 X3) \\
& (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \\
& \hspace{15em} (7)
\end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow((v1_funct_1\ (k26_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k26_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0\ X0)\wedge((v1_funct_1\ X1)\wedge(\\ & m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers))))\Rightarrow \\ & ((v1_funct_1\ (k1_mesfunc5\ X0\ X1))\wedge(m1_subset_1\ (k1_mesfunc5 \\ & X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k7_numbers)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge(\\ & m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers))))\Rightarrow(\\ & k1_mesfunc5\ X0\ X1 = X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((\neg v1_xboole_0\ X1)\wedge \\ & ((v1_prob_1\ X1\ X0)\wedge((v4_prob_1\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k1_zfmisc_1\ X0))))\Rightarrow(\forall X2.((v1_funct_1\ X2)\wedge((v1_funct_2 \\ & X2\ X1\ k7_numbers)\wedge((v10_valued_0\ X2)\wedge((v6_supinf_2\ X2)\wedge((v4_measure1 \\ & X2\ X0\ X1)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X1\ k7_numbers))))))\Rightarrow \\ & (\forall X3.((v1_funct_1\ X3)\wedge(m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers))))\Rightarrow(\forall X4.(m2_subset_1\ X4\ (k1_zfmisc_1\ X0) \\ & X1)\Rightarrow(k2_mesfunc6\ X0\ X1\ X2\ X3\ X4 = k1_mesfunc6\ X0\ X1\ X2\ (k2_partfun1 \\ & X0\ k1_numbers\ X3\ X4)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((\neg v1_xboole_0\ X1)\wedge \\ & ((v1_prob_1\ X1\ X0)\wedge((v4_prob_1\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k1_zfmisc_1\ X0))))\Rightarrow(\forall X2.((v1_funct_1\ X2)\wedge((v1_funct_2 \\ & X2\ X1\ k7_numbers)\wedge((v10_valued_0\ X2)\wedge((v6_supinf_2\ X2)\wedge((v4_measure1 \\ & X2\ X0\ X1)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X1\ k7_numbers))))))\Rightarrow \\ & (\forall X3.((v1_funct_1\ X3)\wedge(m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers))))\Rightarrow((r3_mesfunc6\ X0\ X1\ X2\ X3)\Leftrightarrow(r1_mesfunc5\ X0\ X1 \\ & X2\ (k1_mesfunc5\ X0\ X3)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k1_numbers)))) \Rightarrow (k1_mesfunc6 X0 X1 X2 X3 = k7_mesfunc5 X0 X1 X2 \\
& (k1_mesfunc5 X0 X3))))))
\end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k7_numbers)))) \Rightarrow (\forall X4.(m2_subset_1 X4 (k1_zfmisc_1 X0) \\
& X1) \Rightarrow (k8_mesfunc5 X0 X1 X2 X3 X4 = k7_mesfunc5 X0 X1 X2 (k2_partfun1 \\
& X0 k7_numbers X3 X4))))))
\end{aligned} \tag{14}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \tag{15}$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{16}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \tag{17}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k1_numbers)))) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow (\\
& \forall X5.(m2_subset_1 X5 (k1_zfmisc_1 X0) X1) \Rightarrow ((r3_mesfunc6 \\
& X0 X1 X2 X3) \Rightarrow ((r3_mesfunc6 X0 X1 X2 (k2_partfun1 X0 k1_numbers X3 \\
& X5) \wedge (k2_mesfunc6 X0 X1 X2 (k26_valued_1 X0 k1_numbers X3 X4) X5 = \\
& k1_extreal1 (k1_measure6 X4) (k2_mesfunc6 X0 X1 X2 X3 X5))))))
\end{aligned}$$