

t43_mesfunc5 (TM- NoCRsZe2MVdgZHsRKCQJkMbkyi3rtFcKB)

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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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_mesfunc5 : \iota \Rightarrow o$ be given. Let $k3_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \Rightarrow (\forall X3. (\\
& (v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\
& k7_numbers)))) \Rightarrow (\forall X4. (m2_subset_1 X4 (k1_zfmisc_1 X0 \\
& X1) \Rightarrow (((v3_mesfunc5 X2) \wedge ((v3_mesfunc5 X3) \wedge ((r1_mesfunc1 X0 X1 \\
& X2 X4) \wedge (r1_mesfunc1 X0 X1 X3 X4)))) \Rightarrow (r1_mesfunc1 X0 X1 (k3_mesfunc1 \\
& X0 X2 X3) X4))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\
& m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \Rightarrow (\\
& \forall X2. ((\neg v1_xboole_0 X2) \wedge ((v1_prob_1 X2 X0) \wedge ((v4_prob_1 \\
& X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 X2) \Rightarrow (((r1_mesfunc1 X0 X2 X1 X3) \wedge (r1_tarski X3 (\\
& k1_relset_1 X0 X1)))) \Rightarrow (r1_mesfunc1 X0 X2 (k2_mesfunc2 X0 X1) X3))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \Rightarrow (\\ \forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_prob_1 X2 X0) \wedge ((v4_prob_1 \\ X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 X2) \Rightarrow ((r1_mesfunc1 X0 X2 X1 X3) \Rightarrow (r1_mesfunc1 X0 \\ X2 (k1_mesfunc2 X0 X1) X3)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\ X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\ (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 k7_numbers)))) \Rightarrow ((v6_supinf_2 (k1_mesfunc2 X0 X3)) \wedge ((v6_supinf_2 \\ (k2_mesfunc2 X0 X3)) \wedge (v6_supinf_2 (k10_mesfunc1 X0 X3)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (((v1_relat_1 \\ X1) \wedge ((v4_relat_1 X1 X0) \wedge ((v5_relat_1 X1 k7_numbers) \wedge (v1_funct_1 \\ X1)))) \wedge ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 X0) \wedge ((v5_relat_1 X2 \\ k7_numbers) \wedge (v1_funct_1 X2)))))) \Rightarrow ((v1_funct_1 (k3_mesfunc1 \\ X0 X1 X2)) \wedge (m1_subset_1 (k3_mesfunc1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 k7_numbers)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge \\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \Rightarrow \\ ((v1_funct_1 (k2_mesfunc2 X0 X1)) \wedge (m1_subset_1 (k2_mesfunc2 \\ X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge \\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \Rightarrow \\ ((v1_funct_1 (k1_mesfunc2 X0 X1)) \wedge (m1_subset_1 (k1_mesfunc2 \\ X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))\Rightarrow(((v1_funct_1 X1)\wedge(v6_supinf_2 X1))\Rightarrow((v1_funct_1 X1)\wedge(v3_mesfunc5 X1)))) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_xboole_0 X1)\wedge \\ & ((v1_prob_1 X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\ & X2 X1 k7_numbers)\wedge((v10_valued_0 X2)\wedge((v6_supinf_2 X2)\wedge((v4_measure1 \\ & X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers))))))\Rightarrow \\ & (\forall X3.(m2_subset_1 X3 (k1_zfmisc_1 X0) X1)\Rightarrow(\forall X4. \\ & ((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\ & k7_numbers))))\Rightarrow(\forall X5.((v1_funct_1 X5)\wedge(m1_subset_1 X5 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers))))\Rightarrow(((r1_tarski X3 \\ & (k1_relset_1 X0 X4)\wedge((r1_mesfunc1 X0 X1 X4 X3)\wedge((r1_mesfunc1 \\ & X0 X1 X5 X3)\wedge((v3_mesfunc5 X4)\wedge(v3_mesfunc5 X5))))\Rightarrow(r1_mesfunc1 \\ & X0 X1 (k3_mesfunc1 X0 (k1_mesfunc2 X0 (k3_mesfunc1 X0 X4 X5)) (k2_mesfunc2 \\ & X0 X4) X3)))))) \end{aligned}$$