

t14_measure3

(TMbc8wT9y5zqejMd5qYmVPCPpKaRyoP4gcy)

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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 $v2_measure1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_prob_2 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_measure2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_measure3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_supinf_2 : \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_measure1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k4_measure1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m1_measure2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ (r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X1) \wedge ((v1_prob_1 X1 X0) \wedge \\ ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X1 k7_numbers) \wedge \\ ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v2_measure1 X2 X0 X1) \wedge \\ (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\ (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers X1) \wedge \\ ((v1_prob_2 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X1)))))) \Rightarrow (r1_xxreal_0 (k19_supinf_2 (k1_partfun1 k5_numbers \\ X1 X1 k7_numbers X3 X2)) (k12_supinf_2 X2 (k2_measure2 X0 X1 (k1_measure3 \\ X0 X1 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))\Rightarrow(k5_setfam_1 X0 X1 = k3_tarski X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge((v1_prob_1 \\ & X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 k5_numbers X1)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1))))))\Rightarrow(k4_measure1 \\ & X0 X1 X2 = k10_xtuple_0 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge((v1_prob_1 \\ & X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))))))\wedge(m1_measure2 X2 X0 X1))\Rightarrow(k2_measure2 X0 X1 X2 = k3_tarski \\ & X2) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3))))\Rightarrow(k1_partfun1 X0 X1 X2 X3 X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge((v1_prob_1 \\ & X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 k5_numbers X1)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1))))))\Rightarrow(k1_measure3 \\ & X0 X1 X2 = k10_xtuple_0 X2) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v2_valued_0 X0)))\Rightarrow(k12_supinf_2 X0 X1 = k1_funct_1 X0 X1) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\ & X1)\wedge(((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 X3 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge((v1_funct_2 \\ & X4 X1 X2)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 X2))))))\Rightarrow \\ & ((v1_funct_1 (k3_relat_1 X3 X4))\wedge(v1_funct_2 (k3_relat_1 X3 X4) \\ & X0 X2)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v2_valued_0 X0)))\Rightarrow(v1_xxreal_0 (k1_funct_1 X0 X1)) \quad (10)$$

Assume the following.

$$v2_membered\ k7_numbers \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge((v1_prob_1 \\ & X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 k5_numbers X1)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1))))))\Rightarrow((\neg v1_xboole_0 \\ & (k4_measure1 X0 X1 X2))\wedge(m1_subset_1 (k4_measure1 X0 X1 X2) (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3))))\Rightarrow((v1_funct_1 (k1_partfun1 X0 X1 X2 X3 X4 X5))\wedge(m1_subset_1 \\ & (k1_partfun1 X0 X1 X2 X3 X4 X5) (k1_zfmisc_1 (k2_zfmisc_1 X0 X3)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge((v1_prob_1 \\ & X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 k5_numbers X1)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1))))))\Rightarrow(m1_measure2 \\ & (k1_measure3 X0 X1 X2) X0 X1) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k7_numbers)\wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k7_numbers))))\Rightarrow \\ & (m1_subset_1 (k19_supinf_2 X0) k7_numbers) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X1)\wedge((v1_prob_1 X1 X0)\wedge \\
& ((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\
& X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 X1 k7_numbers)\wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers))))))\Rightarrow \\
& ((v4_measure1 X2 X0 X1)\Leftrightarrow(\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 \\
& X3 k5_numbers X1)\wedge((v1_prob_2 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 k5_numbers X1))))))\Rightarrow(k19_supinf_2 (k1_partfun1 \\
& k5_numbers X1 X1 k7_numbers X3 X2) = k12_supinf_2 X2 (k5_setfam_1 \\
& X0 (k4_measure1 X0 X1 X3))))))
\end{aligned} \tag{16}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(v2_membered X1)\Rightarrow(\forall X2.(m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v2_valued_0 X2))
\end{aligned} \tag{18}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v2_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow \\
& (v1_xxreal_0 X1))
\end{aligned} \tag{19}$$

Theorem 1

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X1)\wedge((v1_prob_1 X1 X0)\wedge \\
& ((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\
& X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 X1 k7_numbers)\wedge \\
& ((v10_valued_0 X2)\wedge((v6_supinf_2 X2)\wedge((v2_measure1 X2 X0 X1)\wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers))))))))\Rightarrow \\
& ((\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 k5_numbers X1)\wedge \\
& ((v1_prob_2 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\
& X1))))))\Rightarrow(r1_xxreal_0 (k12_supinf_2 X2 (k2_measure2 X0 X1 (k1_measure3 \\
& X0 X1 X3)) (k19_supinf_2 (k1_partfun1 k5_numbers X1 X1 k7_numbers \\
& X3 X2))))\Rightarrow((v1_funct_1 X2)\wedge((v1_funct_2 X2 X1 k7_numbers)\wedge((\\
& v10_valued_0 X2)\wedge((v6_supinf_2 X2)\wedge((v4_measure1 X2 X0 X1)\wedge(\\
& m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers))))))))))
\end{aligned}$$