

t12_measure3 (TMTbzGyJS- guERqEm82YDwRYSZQKyPenXTK8)

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 $k7_numbers : \iota$ 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 $k5_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_supinf_1 : \iota$ be given. Let $k12_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_measure2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_measure3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_supinf_2 : \iota \Rightarrow \iota$ be given. Let $k17_supinf_2 : \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k3_measure1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_supinf_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_prob_1 X1 X0) \wedge \\
& ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\
& X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers \\
& X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1)))))) \Rightarrow \\
& (\exists X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers X1) \wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1)))))) \wedge \\
& ((k8_nat_1 X1 X3 k6_numbers = k1_xboole_0) \wedge (\forall X4. (m2_subset_1 \\
& X4 k1_numbers k5_numbers) \Rightarrow (k8_nat_1 X1 X3 (k2_nat_1 X4 np_1) = \\
& k3_measure1 X0 X1 (k8_nat_1 X1 X2 k6_numbers) (k8_nat_1 X1 X2 X4))))))
\end{aligned}
\tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X1)\wedge((v1_prob_1 X1 X0)\wedge \\
& ((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\
& X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 X1 k7_numbers)\wedge \\
& ((v10_valued_0 X2)\wedge((v6_supinf_2 X2)\wedge((v4_measure1 X2 X0 X1)\wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers))))))\Rightarrow \\
& (\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 k5_numbers X1)\wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1))))\Rightarrow \\
& (\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 X4 k5_numbers X1)\wedge \\
& (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1))))\Rightarrow \\
& (((k8_nat_1 X1 X3 k6_numbers = k1_xboole_0)\wedge(\forall X5.(m2_subset_1 \\
& X5 k1_numbers k5_numbers)\Rightarrow((k8_nat_1 X1 X3 (k2_nat_1 X5 np_1) = \\
& k3_measure1 X0 X1 (k8_nat_1 X1 X4 k6_numbers) (k8_nat_1 X1 X4 X5))\wedge \\
& (r1_tarski (k8_nat_1 X1 X4 (k2_nat_1 X5 np_1)) (k8_nat_1 X1 X4 X5))))\Rightarrow \\
& ((r1_xxreal_0 k1_supinf_1 (k12_supinf_2 X2 (k8_nat_1 X1 X4 k6_numbers))\vee \\
& (k12_supinf_2 X2 (k1_measure2 X0 X1 (k1_measure3 X0 X1 X4)) = k4_supinf_2 \\
& (k12_supinf_2 X2 (k8_nat_1 X1 X4 k6_numbers)) (k8_supinf_2 (k17_supinf_2 \\
& (k1_partfun1 k5_numbers X1 X1 k7_numbers X3 X2)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X1)\wedge((v1_prob_1 X1 X0)\wedge \\
& ((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\
& X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 X1 k7_numbers)\wedge \\
& ((v10_valued_0 X2)\wedge((v6_supinf_2 X2)\wedge((v4_measure1 X2 X0 X1)\wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers))))))\Rightarrow \\
& (\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 k5_numbers X1)\wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1))))\Rightarrow \\
& (\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 X4 k5_numbers X1)\wedge \\
& (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1))))\Rightarrow \\
& (((k8_nat_1 X1 X3 k6_numbers = k1_xboole_0)\wedge(\forall X5.(m2_subset_1 \\
& X5 k1_numbers k5_numbers)\Rightarrow((k8_nat_1 X1 X3 (k2_nat_1 X5 np_1) = \\
& k3_measure1 X0 X1 (k8_nat_1 X1 X4 k6_numbers) (k8_nat_1 X1 X4 X5))\wedge \\
& (r1_tarski (k8_nat_1 X1 X4 (k2_nat_1 X5 np_1)) (k8_nat_1 X1 X4 X5))))\Rightarrow \\
& ((r1_xxreal_0 k1_supinf_1 (k12_supinf_2 X2 (k8_nat_1 X1 X4 k6_numbers))\vee \\
& (k7_supinf_2 (k17_supinf_2 (k1_partfun1 k5_numbers X1 X1 k7_numbers \\
& X4 X2)) = k4_supinf_2 (k12_supinf_2 X2 (k8_nat_1 X1 X4 k6_numbers)) \\
& (k8_supinf_2 (k17_supinf_2 (k1_partfun1 k5_numbers X1 X1 k7_numbers \\
& X3 X2)))))))))
\end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_prob_1 X1 X0) \wedge \\ & ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X1 k7_numbers) \wedge \\ & ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 X2 X0 X1) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))))))) \Rightarrow \\ & (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers X1) \wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1)))))) \Rightarrow \\ & ((\forall X4. (m2_subset_1 X4 k1_numbers k5_numbers) \Rightarrow (r1_tarski \\ & (k8_nat_1 X1 X3 (k2_nat_1 X4 np_1)) (k8_nat_1 X1 X3 X4))) \Rightarrow ((r1_xreal_0 \\ & k1_supinf_1 (k12_supinf_2 X2 (k8_nat_1 X1 X3 k6_numbers))) \vee (k12_supinf_2 \\ & X2 (k1_measure2 X0 X1 (k1_measure3 X0 X1 X3)) = k7_supinf_2 (k17_supinf_2 \\ & (k1_partfun1 k5_numbers X1 X1 k7_numbers X3 X2)))))) \end{aligned}$$