

t55_analmetr (TM-
RLx3AZPTzzs563ButXmZDQ9faFB9tV7NC)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_analmetr : \iota \Rightarrow o$ be given. Let $l1_analmetr : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v4_analmetr : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r6_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $g1_analoaf : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_analoaf : \iota \Rightarrow \iota$ be given. Let $v1_diraf : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_analmetr X0) \wedge (l1_analmetr \\ & \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & \quad X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((X2 \in X1) \wedge ((X3 \in X1) \wedge (v4_analmetr \\ & \quad X1 X0))) \Rightarrow ((X2 = X3) \vee (X1 = k4_analmetr X0 X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_analmetr X0)) \Rightarrow ((v2_analmetr \\
& X0) \Leftrightarrow (((\neg v7_struct_0 (g1_analoaf (u1_struct_0 X0) (u1_analoaf \\
& X0))) \wedge ((v1_diraf (g1_analoaf (u1_struct_0 X0) (u1_analoaf X0))) \wedge \\
& (l1_analoaf (g1_analoaf (u1_struct_0 X0) (u1_analoaf X0)))))) \wedge \\
& ((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(\\
& m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 \\
& X6 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X8.(m1_subset_1 X8 (u1_struct_0 X0)) \Rightarrow (((r4_analmetr \\
& X0 X1 X2 X1 X2) \Rightarrow (X1 = X2)) \wedge ((r4_analmetr X0 X1 X2 X3 X3) \wedge ((r4_analmetr \\
& X0 X1 X2 X3 X4) \Rightarrow ((r4_analmetr X0 X1 X2 X4 X3) \wedge (r4_analmetr X0 X3 X4 \\
& X1 X2))) \wedge ((\neg (r4_analmetr X0 X1 X2 X5 X6) \wedge ((r2_analoaf X0 X1 X2 X7 \\
& X8) \wedge ((\neg r4_analmetr X0 X5 X6 X7 X8) \wedge (X1 \neq X2)))))) \wedge (((r4_analmetr \\
& X0 X1 X2 X5 X6) \wedge (r4_analmetr X0 X1 X2 X5 X8)) \Rightarrow (r4_analmetr X0 X1 X2 \\
& X6 X8))))))))) \wedge ((\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg (X1 \neq X2) \wedge (\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 X0)) \Rightarrow (\neg (r2_analoaf X0 X1 X2 X1 X4) \wedge (r4_analmetr \\
& X0 X1 X2 X4 X3)))))) \wedge (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\exists X4.(m1_subset_1 X4 \\
& (u1_struct_0 X0)) \wedge ((r4_analmetr X0 X1 X2 X3 X4) \wedge (X3 \neq X4))))))))) \\
& \tag{3}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_analmetr X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (\\
& u1_struct_0 X0))) \Rightarrow ((r6_analmetr X0 X1 X2 X3) \Leftrightarrow (\exists X4.(m1_subset_1 \\
& X4 (u1_struct_0 X0)) \wedge (\exists X5.(m1_subset_1 X5 (u1_struct_0 \\
& X0)) \wedge ((X4 \neq X5) \wedge ((X3 = k4_analmetr X0 X4 X5) \wedge (r4_analmetr X0 X1 X2 \\
& X4 X5))))))))) \\
& \tag{4}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_analmetr X0) \wedge (l1_analmetr \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\
& X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow \\
& (((X2 \in X1) \wedge ((X3 \in X1) \wedge (v4_analmetr X1 X0))) \Rightarrow ((X2 = X3) \vee (((\neg r4_analmetr \\
& X0 X2 X3 X4 X5) \wedge (\neg r4_analmetr X0 X4 X5 X2 X3)) \vee (r6_analmetr X0 X4 X5 \\
& X1))))))))) \\
& \tag{4}
\end{aligned}$$