

t29_jordan (TM-
RYqhA7Kv9ay7XYxGoKeuzQHxktrs71CZX)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_borsuk_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_borsuk_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_borsuk_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k5_topmetr : \iota$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \Rightarrow ((r1_tarski (k2_relset_1 X1 X3) X2) \Rightarrow (((X1 = k1_xboole_0) \wedge \\ & (X0 \neq k1_xboole_0)) \vee ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X2) \wedge (\\ & m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1))) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3. (m1_pre_topc X3 X1) \Rightarrow ((\\ & v5_pre_topc X2 X0 X1) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 \\ & X4 (u1_struct_0 X0) (u1_struct_0 X3)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X3)))))) \Rightarrow ((X4 = X2) \Rightarrow \\ & (v5_pre_topc X4 X0 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow((r1_borsuk_6 X0 X1 X2)\Leftrightarrow(r1_borsuk_2 X0 X1 X2)) \quad (3)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (4)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(\exists X2.(m1_borsuk_2 X2 X0 X1 X1)\wedge((\neg v1_xboole_0 X2)\wedge((v1_relat_1 X2)\wedge((v4_relat_1 X2 (u1_struct_0 k5_topmetr))\wedge((v5_relat_1 X2 (u1_struct_0 X0))\wedge((v1_funct_1 X2)\wedge((v1_partfun1 X2 (u1_struct_0 k5_topmetr))\wedge((v1_funct_2 X2 (u1_struct_0 k5_topmetr) (u1_struct_0 X0))\wedge(v5_pre_topc X2 k5_topmetr X0)))))))))) \quad (6)$$

Assume the following.

$$(\neg v2_struct_0 k17_borsuk_1)\wedge((v1_pre_topc k17_borsuk_1)\wedge(v2_pre_topc k17_borsuk_1)) \quad (7)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow(l1_pre_topc X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1_pre_topc X0)\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(\forall X3.(m1_borsuk_2 X3 X0 X1 X2)\Rightarrow((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 k5_topmetr) (u1_struct_0 X0))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 k5_topmetr) (u1_struct_0 X0)))))))) \quad (10)$$

Assume the following.

$$l1_pre_topc k17_borsuk_1 \quad (11)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0)) \Rightarrow ((r1_borsuk_2 \\
& X0\ X1\ X2) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (u1_struct_0 \\
& k5_topmetr)\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (\\
& k2_zfmisc_1\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ X0)))))) \Rightarrow \\
& ((m1_borsuk_2\ X3\ X0\ X1\ X2) \Leftrightarrow ((v5_pre_topc\ X3\ k5_topmetr\ X0) \wedge ((k1_funct_1 \\
& X3\ k6_numbers = X1) \wedge (k1_funct_1\ X3\ np_1 = X2))))))
\end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0)) \Rightarrow ((r1_borsuk_2 \\
& X0\ X1\ X2) \Leftrightarrow (\exists X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (u1_struct_0 \\
& k5_topmetr)\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (\\
& k2_zfmisc_1\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ X0)))))) \wedge \\
& ((v5_pre_topc\ X3\ k5_topmetr\ X0) \wedge ((k1_funct_1\ X3\ k6_numbers = X1) \wedge \\
& (k1_funct_1\ X3\ np_1 = X2))))))
\end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xboole_0\ X0) \Rightarrow (\forall X1.((v1_relat_1\ X1) \wedge (v5_relat_1 \\
& X1\ X0)) \Rightarrow ((v1_xboole_0\ X1) \wedge ((v1_relat_1\ X1) \wedge (v5_relat_1\ X1\ X0))))
\end{aligned} \tag{14}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (\forall X1. \\
& (m1_pre_topc\ X1\ X0) \Rightarrow (v2_pre_topc\ X1))
\end{aligned} \tag{15}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0\ X0) \wedge ((v2_pre_topc\ X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge (m1_pre_topc\ X1\ X0)) \Rightarrow (\\
& \forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3\ (u1_struct_0\ X0)) \Rightarrow (\forall X4.(m1_subset_1\ X4\ (u1_struct_0 \\
& X1)) \Rightarrow (\forall X5.(m1_subset_1\ X5\ (u1_struct_0\ X1)) \Rightarrow (\forall X6. \\
& (m1_borsuk_2\ X6\ X0\ X2\ X3) \Rightarrow (((X2 = X4) \wedge ((X3 = X5) \wedge ((r1_borsuk_6\ X0 \\
& X2\ X3) \wedge (r1_tarski\ (k2_relset_1\ (u1_struct_0\ X0)\ X6)\ (u1_struct_0 \\
& X1)))))) \Rightarrow ((r1_borsuk_6\ X1\ X4\ X5) \wedge (m1_borsuk_2\ X6\ X1\ X4\ X5))))))
\end{aligned}$$