

t7_jordan16

(TMZ9Fi7x5bLWrCLNd7u9NB3TCARSrmESr5M)

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Let $v1_topreal2 : \iota \Rightarrow o$ 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 $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $r1_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k22_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k8_jordan6 : \iota \Rightarrow \iota$ be given. Let $k9_jordan6 : \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k1_jordan5c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_jordan6 : \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k8_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k2_jordan5c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_jordan5c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\ & \quad np_2))) \Rightarrow (((v1_topreal2 X0) \wedge (X1 \in X0)) \Rightarrow (r1_jordan6 X0 X1 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow ((v1_topreal2 X0) \Rightarrow ((r1_topreal1 (k15_euclid np_2) \\
& \quad (k18_pscomp_1 X0) (k22_pscomp_1 X0) (k8_jordan6 X0)) \wedge ((r1_topreal1 \\
& \quad (k15_euclid np_2) (k22_pscomp_1 X0) (k18_pscomp_1 X0) (k8_jordan6 \\
& \quad X0)) \wedge ((r1_topreal1 (k15_euclid np_2) (k22_pscomp_1 X0) (k18_pscomp_1 \\
& \quad X0) (k9_jordan6 X0)) \wedge ((r1_topreal1 (k15_euclid np_2) (k18_pscomp_1 \\
& \quad X0) (k22_pscomp_1 X0) (k9_jordan6 X0)) \wedge ((k4_subset_1 (u1_struct_0 \\
& \quad (k15_euclid np_2)) (k8_jordan6 X0) (k9_jordan6 X0) = k2_tarski \\
& \quad (k18_pscomp_1 X0) (k22_pscomp_1 X0)) \wedge ((k4_subset_1 (u1_struct_0 \\
& \quad (k15_euclid np_2)) (k8_jordan6 X0) (k9_jordan6 X0) = X0) \wedge (\neg r1_xxreal_0 \\
& \quad (k18_euclid (k1_jordan5c (k8_jordan6 X0) (k6_jordan6 (k10_real_1 \\
& \quad (k7_real_1 (k6_pscomp_1 X0) (k8_pscomp_1 X0)) np_2)) (k18_pscomp_1 \\
& \quad X0) (k22_pscomp_1 X0))) (k18_euclid (k2_jordan5c (k9_jordan6 \\
& \quad X0) (k6_jordan6 (k10_real_1 (k7_real_1 (k6_pscomp_1 X0) (k8_pscomp_1 \\
& \quad X0)) np_2)) (k22_pscomp_1 X0) (k18_pscomp_1 X0)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\neg(r1_topreal1 (k15_euclid np_2) X1 X2 X0) \wedge ((X3 \in X0) \wedge \\
& \quad ((X4 \in X0) \wedge ((X3 \neq X4) \wedge ((\neg(r1_jordan5c X0 X1 X2 X3 X4) \wedge (\neg r1_jordan5c \\
& \quad X0 X1 X2 X4 X3)) \wedge (\neg(r1_jordan5c X0 X1 X2 X4 X3) \wedge (\neg r1_jordan5c X0 X1 \\
& \quad X2 X3 X4)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\
& \quad X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = \\
& \quad k2_xboole_0 X1 X2)
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow ((\neg v1_xboole_0 (k9_jordan6 X0)) \wedge (m1_subset_1 (k9_jordan6 \\
& \quad X0) (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow ((\neg v1_xboole_0 (k8_jordan6 X0)) \wedge (m1_subset_1 (k8_jordan6 \\
& \quad X0) (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m1_subset_1 (k22_pscomp_1 X0) (u1_struct_0 (k15_euclid np_2))) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m1_subset_1 (k18_pscomp_1 X0) (u1_struct_0 (k15_euclid np_2))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))) \\ & \Rightarrow ((r1_jordan6 X0 X1 X2) \Leftrightarrow (\neg(\neg(X1 \in k8_jordan6 X0) \wedge ((X2 \in k9_jordan6 X0) \wedge (X2 \neq k18_pscomp_1 X0))) \wedge (\neg(X1 \in k8_jordan6 X0) \wedge ((X2 \in k8_jordan6 X0) \wedge (r1_jordan5c (k8_jordan6 X0) (k18_pscomp_1 X0) (k22_pscomp_1 X0) X1 X2)))) \wedge (\neg(X1 \in k9_jordan6 X0) \wedge ((X2 \in k9_jordan6 X0) \wedge (X2 \neq k18_pscomp_1 X0) \wedge (r1_jordan5c (k9_jordan6 X0) (k22_pscomp_1 X0) (k18_pscomp_1 X0) X1 X2)))))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))) \\ & \Rightarrow (\neg(X1 \in X0) \wedge ((X2 \in X0) \wedge (\neg r1_jordan6 X0 X1 X2) \wedge (\neg r1_jordan6 X0 X2 X1)))) \end{aligned}$$