

t14_jordan16

(TMVPaJDMLiPNzmZ8RjPtttdQtixiHkdrZZFd)

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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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\
 & \quad (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\
 & \quad (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X2.(m1_subset_1 \\
 & \quad X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X3. \\
 & \quad (m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X4. \\
 & \quad (m1_subset_1 X4 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (((r1_topreal1 \\
 & \quad (k15_euclid np_2) X3 X4 X1) \wedge ((r1_topreal1 (k15_euclid np_2) \\
 & \quad X3 X4 X2) \wedge ((r1_tarski X1 X0) \wedge (r1_tarski X2 X0)))) \Rightarrow ((X1 = X2) \vee ((\\
 & \quad k4_subset_1 (u1_struct_0 (k15_euclid np_2)) X1 X2 = X0) \wedge (k9_subset_1 \\
 & \quad (u1_struct_0 (k15_euclid np_2)) X1 X2 = k2_tarski X3 X4)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
 & \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\
 & \quad (k15_euclid np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
 & \quad (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X3.(m1_subset_1 \\
 & \quad X3 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X4.(m1_subset_1 \\
 & \quad X4 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\neg(r1_topreal1 (k15_euclid \\
 & \quad np_2) X3 X4 X0) \wedge ((r1_topreal1 (k15_euclid np_2) X3 X4 X1) \wedge ((r1_topreal1 \\
 & \quad (k15_euclid np_2) X3 X4 X2) \wedge ((k9_subset_1 (u1_struct_0 (k15_euclid \\
 & \quad np_2)) X1 X2 = k2_tarski X3 X4) \wedge ((r1_tarski X0 (k4_subset_1 (u1_struct_0 \\
 & \quad (k15_euclid np_2)) X1 X2) \wedge ((X0 \neq X1) \wedge (X0 \neq X2))))))))))
 \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ & \quad (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & \quad (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X2.(m1_subset_1 \\ & \quad X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X3. \\ & \quad (m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X4. \\ & \quad (m1_subset_1 X4 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (((r1_tarski \\ & \quad X1 X0) \wedge ((r1_tarski X2 X0) \wedge ((r1_topreal1 (k15_euclid np_2) X3 \\ & \quad X4 X1) \wedge (r1_topreal1 (k15_euclid np_2) X3 X4 X2)))) \Rightarrow ((X1 = X2) \vee \\ & \quad (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & \quad np_2)))) \Rightarrow (\neg(r1_topreal1 (k15_euclid np_2) X3 X4 X5) \wedge ((r1_tarski \\ & \quad X5 X0) \wedge ((X5 \neq X1) \wedge (X5 \neq X2)))))))))) \end{aligned}$$