

t14_jordan17

(TMF6dkUP7o5F4j66pYjcCJbKbkCKLEZUBxs)

October 27, 2020

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 $r1_jordan17 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (& (v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow (\neg (X1 \neq X2) \wedge ((r1_jordan6 X0 X1 X2) \wedge (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\neg (X3 \neq X1) \wedge \\ & ((X3 \neq X2) \wedge ((r1_jordan6 X0 X1 X3) \wedge (r1_jordan6 X0 X3 X2))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow (\neg (X1 \in X0) \wedge (\forall X2. (m1_subset_1 X2 \\ & (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\neg (X1 \neq X2) \wedge (r1_jordan6 X0 \\ & X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (\neg v1_xboole_0 X0) \wedge ((v2_compts_1 X0 (k15_euclid np_2)) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\ & (((v1_topreal2 X0) \wedge (r1_jordan6 X0 X1 X2)) \Rightarrow ((X1 \in X0) \wedge (X2 \in X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (((v1_topreal2 X0) \wedge ((r1_jordan6 X0 X1 X2) \wedge (r1_jordan6 \\
& \quad X0 X2 X3))) \Rightarrow (r1_jordan6 X0 X1 X3))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow ((r1_jordan17 X0 X1 X2 X3 X4) \Leftrightarrow (\neg(\neg(r1_jordan6 X0 X1 X2) \wedge \\
& \quad ((r1_jordan6 X0 X2 X3) \wedge (r1_jordan6 X0 X3 X4))) \wedge (\neg(r1_jordan6 \\
& \quad X0 X2 X3) \wedge ((r1_jordan6 X0 X3 X4) \wedge (r1_jordan6 X0 X4 X1))) \wedge (\neg(r1_jordan6 \\
& \quad X0 X3 X4) \wedge ((r1_jordan6 X0 X4 X1) \wedge (r1_jordan6 X0 X1 X2))) \wedge (\neg(r1_jordan6 \\
& \quad X0 X4 X1) \wedge ((r1_jordan6 X0 X1 X2) \wedge (r1_jordan6 X0 X2 X3))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow ((v1_topreal2 X0) \Rightarrow ((\neg v1_xboole_0 X0) \wedge (v2_compts_1 \\
& \quad X0 (k15_euclid np_2))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\
& \quad (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& \quad (k15_euclid np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& \quad (k15_euclid np_2))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& \quad (k15_euclid np_2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& \quad (k15_euclid np_2)))) \Rightarrow (\neg(X1 \neq X2) \wedge ((r1_jordan17 X0 X1 X2 X3 X4) \wedge \\
& \quad (\forall X5.(m1_subset_1 X5 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& \quad (\neg(X5 \neq X1) \wedge (X5 \neq X2) \wedge (r1_jordan17 X0 X1 X5 X2 X4))))))))))
\end{aligned}$$