

t17_jordan16

(TMLaW3zbcfiWo4XJ8R5J8dWubHhwUYxt4tk)

October 27, 2020

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 $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_jordan5c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_topmetr : \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\ & \quad np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid \\ & \quad np_2)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\ & \quad np_2)))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k15_euclid \\ & \quad np_2)))) \Rightarrow (((r1_topreal1 (k15_euclid np_2) X1 X2 X0) \wedge ((r1_jordan5c \\ & \quad X0 X1 X2 X3 X4) \wedge (r1_jordan5c X0 X1 X2 X4 X3))) \Rightarrow (X3 = X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k15_euclid \\
& np_2))) \Rightarrow ((r1_jordan5c X0 X1 X2 X3 X4) \Leftrightarrow ((X3 \in X0) \wedge ((X4 \in X0) \wedge (\forall X5. \\
& ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (u1_struct_0 k5_topmetr) (u1_struct_0 \\
& (k1_pre_topc (k15_euclid np_2) X0))) \wedge (m1_subset_1 X5 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 k5_topmetr) (u1_struct_0 (k1_pre_topc \\
& (k15_euclid np_2) X0)))))) \Rightarrow (\forall X6.(m1_subset_1 X6 k1_numbers) \Rightarrow \\
& (\forall X7.(m1_subset_1 X7 k1_numbers) \Rightarrow (((v3_tops_2 X5 k5_topmetr \\
& (k1_pre_topc (k15_euclid np_2) X0)) \wedge ((k1_funct_1 X5 k6_numbers = \\
& X1) \wedge ((k1_funct_1 X5 np_1 = X2) \wedge ((k1_funct_1 X5 X6 = X3) \wedge ((r1_xxreal_0 \\
& k6_numbers X6) \wedge ((r1_xxreal_0 X6 np_1) \wedge ((k1_funct_1 X5 X7 = X4) \wedge \\
& ((r1_xxreal_0 k6_numbers X7) \wedge (r1_xxreal_0 X7 np_1)))))))))) \Rightarrow \\
& \quad (r1_xxreal_0 X6 X7))))))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\
& \quad np_2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k15_euclid \\
& np_2))) \Rightarrow (\neg(r1_topreal1 (k15_euclid np_2) X1 X2 X0) \wedge ((r1_jordan5c \\
& X0 X1 X2 X3 X4) \wedge ((X3 \neq X4) \wedge (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 \\
& X5 (u1_struct_0 k5_topmetr) (u1_struct_0 (k1_pre_topc (k15_euclid \\
& np_2) X0))) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& k5_topmetr) (u1_struct_0 (k1_pre_topc (k15_euclid np_2) X0)))))) \Rightarrow \\
& (\forall X6.(m1_subset_1 X6 k1_numbers) \Rightarrow (\forall X7.(m1_subset_1 \\
& X7 k1_numbers) \Rightarrow (\neg(v3_tops_2 X5 k5_topmetr (k1_pre_topc (k15_euclid \\
& np_2) X0)) \wedge ((k1_funct_1 X5 k6_numbers = X1) \wedge ((k1_funct_1 X5 np_1 = \\
& X2) \wedge ((k1_funct_1 X5 X6 = X3) \wedge ((k1_funct_1 X5 X7 = X4) \wedge ((r1_xxreal_0 \\
& k6_numbers X6) \wedge ((\neg r1_xxreal_0 X7 X6) \wedge (r1_xxreal_0 X7 np_1))))))))))))))
\end{aligned}$$