

t19_jordan16

(TMdxxHtJEnTjV6rpQjiV7yFneKCMaGP1jUy)

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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 $k1_jordan7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_compts_1 X0 (k15_euclid np_2)) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((X1 \in X0) \wedge (v1_topreal2 X0)) \Rightarrow (X1 \in k1_jordan7 X0 X1 (k18_pscomp_1 \\ & X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m1_subset_1 (k18_pscomp_1 X0) (u1_struct_0 (k15_euclid np_2))) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_compts_1 X0 (k15_euclid np_2)) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((X2 \neq k18_pscomp_1 X0) \Rightarrow (k1_jordan7 X0 X1 X2 = ReplSep (toset (\lambda X3 : \\ & \iota. m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))))) (\lambda X3 : \\ & \iota. (r1_jordan6 X0 X1 X3) \wedge (r1_jordan6 X0 X3 X2)) (\lambda X3 : \iota. X3))) \wedge \\ & ((X2 = k18_pscomp_1 X0) \Rightarrow (k1_jordan7 X0 X1 X2 = ReplSep (toset (\lambda X3 : \\ & \iota. m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))))) (\lambda X3 : \\ & \iota. (r1_jordan6 X0 X1 X3) \vee ((X1 \in X0) \wedge (X3 = k18_pscomp_1 X0))) (\lambda X3 : \\ & \iota. X3)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((v1_topreal2 X0) \Rightarrow ((\neg v1_xboole_0 X0) \wedge (v2_compts_1 X0 (k15_euclid np_2)))) \quad (4)$$

Theorem 1

$$\forall X0.((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((X1 \in X0) \Rightarrow ((X1 \in k1_jordan7 X0 X1 (k18_pscomp_1 X0)) \wedge (k18_pscomp_1 X0 \in k1_jordan7 X0 X1 (k18_pscomp_1 X0))))$$