

t82_jordan2c

(TMVvH4PwSd426qLaHfSQL38B7GZdzDangNx)

October 27, 2020

Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_connsp_2 : \iota \Rightarrow o$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid X0)))))) \Rightarrow ((v3_pre_topc X1 (k15_euclid X0)) \Rightarrow (v1_connsp_2 \\ & (k1_pre_topc (k15_euclid X0) X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow \\ & (\forall X2.(v1_xreal_0 X2) \Rightarrow ((X1 = ReplSep (toset (\lambda X3 : \iota. \\ & m1_subset_1 X3 (u1_struct_0 (k15_euclid X0)))) (\lambda X3 : \iota. k12_euclid \\ & X3 = X2) (\lambda X3 : \iota. X3)) \Rightarrow ((v3_pre_topc (k3_subset_1 (u1_struct_0 \\ & (k15_euclid X0)) X1) (k15_euclid X0)) \wedge (v4_pre_topc X1 (k15_euclid \\ & X0)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid X0)))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 (k15_euclid X0)))) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow \\ & (((X2 = ReplSep (toset (\lambda X4 : \iota. m1_subset_1 X4 (u1_struct_0 \\ & (k15_euclid X0)))) (\lambda X4 : \iota. k12_euclid X4 = X3) (\lambda X4 : \iota. \\ & X4)) \wedge (k3_subset_1 (u1_struct_0 (k15_euclid X0)) X2 = X1)) \Rightarrow (v1_connsp_2 \\ & (k1_pre_topc (k15_euclid X0) X1)))))) \end{aligned}$$