

t19_hilbert1 (TMM-
pAKFB4VFA77iHPAVewMG2QBHNYqVGC8V)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_hilbert1 : \iota$ be given. Let $k3_hilbert1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_hilbert1 : \iota$ be given. Let $v6_hilbert1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_hilbert1 : \iota$ be given. Let $k4_hilbert1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$v6_hilbert1 \ k6_hilbert1 \tag{1}$$

Assume the following.

$$m1_subset_1 \ k6_hilbert1 \ (k1_zfmisc_1 \ k1_hilbert1) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_hilbert1) \wedge (m1_subset_1 \ X1 \ k1_hilbert1)) \Rightarrow (m1_subset_1 \ (k3_hilbert1 \ X0 \ X1) \ k1_hilbert1) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ k1_hilbert1)) \Rightarrow ((v6_hilbert1 \ X0) \Leftrightarrow ((k2_hilbert1 \in X0) \wedge (\forall X1. (m1_subset_1 \ X1 \ k1_hilbert1) \Rightarrow \\ & (\forall X2. (m1_subset_1 \ X2 \ k1_hilbert1) \Rightarrow (\forall X3. (m1_subset_1 \ X3 \ k1_hilbert1) \Rightarrow ((k3_hilbert1 \ X1 \ (k3_hilbert1 \ X2 \ X1) \in X0) \wedge ((k3_hilbert1 \\ & (k3_hilbert1 \ X1 \ (k3_hilbert1 \ X2 \ X3)) \ (k3_hilbert1 \ (k3_hilbert1 \\ & X1 \ X2) \ (k3_hilbert1 \ X1 \ X3)) \in X0) \wedge ((k3_hilbert1 \ (k4_hilbert1 \ X1 \\ & X2) \ X1 \in X0) \wedge ((k3_hilbert1 \ (k4_hilbert1 \ X1 \ X2) \ X2 \in X0) \wedge ((k3_hilbert1 \\ & X1 \ (k3_hilbert1 \ X2 \ (k4_hilbert1 \ X1 \ X2)) \in X0) \wedge (((X1 \in X0) \wedge (k3_hilbert1 \\ & X1 \ X2 \in X0)) \Rightarrow (X2 \in X0)))))))))) \tag{4} \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_subset_1 \ X0 \ k1_hilbert1) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ k1_hilbert1) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ k1_hilbert1) \Rightarrow (k3_hilbert1 \\ & (k3_hilbert1 \ X0 \ X1) \ (k3_hilbert1 \ (k3_hilbert1 \ X2 \ X0) \ (k3_hilbert1 \\ & X2 \ X1)) \in k6_hilbert1))) \end{aligned}$$