

t23_hilbert1
(TMQoeLMD25sZHLy2nnC51D5w8t95QvifJHP)

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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.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow ((\\ k3_hilbert1 X0 X1 \in k6_hilbert1) \Rightarrow (k3_hilbert1 (k3_hilbert1 X1 \\ X2) (k3_hilbert1 X0 X2) \in k6_hilbert1)))) \end{aligned} \quad (1)$$

Assume the following.

$$v6_hilbert1 k6_hilbert1 \quad (2)$$

Assume the following.

$$m1_subset_1 k6_hilbert1 (k1_zfmisc_1 k1_hilbert1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_hilbert1) \wedge (m1_subset_1 \\ X1 k1_hilbert1)) \Rightarrow (m1_subset_1 (k3_hilbert1 X0 X1) k1_hilbert1) \quad (4)$$

Assume the following.

$$m1_subset_1 k2_hilbert1 k1_hilbert1 \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow ((v6_hilbert1 \\ X0) \Leftrightarrow ((k2_hilbert1 \in X0) \wedge (\forall X1.(m1_subset_1 X1 k1_hilbert1) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow (\forall X3.(m1_subset_1 \\ X3 k1_hilbert1) \Rightarrow ((k3_hilbert1 X1 (k3_hilbert1 X2 X1) \in X0) \wedge ((k3_hilbert1 \\ (k3_hilbert1 X1 (k3_hilbert1 X2 X3)) (k3_hilbert1 (k3_hilbert1 \\ X1 X2) (k3_hilbert1 X1 X3)) \in X0) \wedge ((k3_hilbert1 (k4_hilbert1 X1 \\ X2) X1 \in X0) \wedge ((k3_hilbert1 (k4_hilbert1 X1 X2) X2 \in X0) \wedge ((k3_hilbert1 \\ X1 (k3_hilbert1 X2 (k4_hilbert1 X1 X2)) \in X0) \wedge (((X1 \in X0) \wedge (k3_hilbert1 \\ X1 X2 \in X0)) \Rightarrow (X2 \in X0)))))))))) \end{aligned} \quad (6)$$

Theorem 1

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