

t35_hilbert1 (TMdf- PePsEa3SFzZPgdpCvxoLTM2PWdNdpMU)

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

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1. (m1_subset_1 \\ X1 k1_hilbert1) \Rightarrow (\forall X2. (m1_subset_1 X2 k1_hilbert1) \Rightarrow ((\\ (k3_hilbert1 X0 X1 \in k6_hilbert1) \wedge (k3_hilbert1 X1 X2 \in k6_hilbert1)) \Rightarrow \\ (k3_hilbert1 X0 X2 \in k6_hilbert1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1. (m1_subset_1 \\ X1 k1_hilbert1) \Rightarrow ((X0 \in k6_hilbert1) \Rightarrow (k3_hilbert1 X1 X0 \in k6_hilbert1))) \end{aligned} \quad (3)$$

Assume the following.

$$v6_hilbert1 k6_hilbert1 \quad (4)$$

Assume the following.

$$m1_subset_1 k6_hilbert1 (k1_zfmisc_1 k1_hilbert1) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((m1_subset_1 X0 k1_hilbert1) \wedge (m1_subset_1 \\ X1 k1_hilbert1)) \Rightarrow (m1_subset_1 (k4_hilbert1 X0 X1) k1_hilbert1) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((m1_subset_1 X0 k1_hilbert1) \wedge (m1_subset_1 \\ X1 k1_hilbert1)) \Rightarrow (m1_subset_1 (k3_hilbert1 X0 X1) k1_hilbert1) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow ((v6_hilbert1 \\
& X0) \Leftrightarrow ((k2_hilbert1 \in X0) \wedge (\forall X1.(m1_subset_1 X1 k1_hilbert1) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 k1_hilbert1) \Rightarrow ((k3_hilbert1 X1 (k3_hilbert1 X2 X1) \in X0) \wedge ((k3_hilbert1 \\
& (k3_hilbert1 X1 (k3_hilbert1 X2 X3)) (k3_hilbert1 (k3_hilbert1 \\
& X1 X2) (k3_hilbert1 X1 X3)) \in X0) \wedge ((k3_hilbert1 (k4_hilbert1 X1 \\
& X2) X1 \in X0) \wedge ((k3_hilbert1 (k4_hilbert1 X1 X2) X2 \in X0) \wedge ((k3_hilbert1 \\
& X1 (k3_hilbert1 X2 (k4_hilbert1 X1 X2)) \in X0) \wedge (((X1 \in X0) \wedge (k3_hilbert1 \\
& X1 X2 \in X0)) \Rightarrow (X2 \in X0))))))))))
\end{aligned} \tag{8}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow (k3_hilbert1 \\
& (k3_hilbert1 X0 X1) (k3_hilbert1 (k3_hilbert1 X0 X2) (k3_hilbert1 \\
& X0 (k4_hilbert1 X1 X2))) \in k6_hilbert1)))
\end{aligned}$$