

t18_hilbert2 (TMUsjrHVdmnKSVMUVk-
ByP15cjEcXMXjJ2rg)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_hilbert1 : \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
 & \quad (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\
 & \quad X1))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 \\
 & \quad X2))) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge ((v1_funct_1 X3) \wedge (v1_finseq_1 \\
 & \quad X3))) \Rightarrow (\neg(k7_finseq_1 X0 X1 = k7_finseq_1 X2 X3) \wedge ((r1_xxreal_0 \\
 & \quad (k3_finseq_1 X0) (k3_finseq_1 X2)) \wedge (\forall X4.((v1_relat_1 \\
 & \quad X4) \wedge ((v1_funct_1 X4) \wedge (v1_finseq_1 X4))) \Rightarrow (k7_finseq_1 X0 X4 \neq \\
 & \quad X2))))))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
 & \quad (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\
 & \quad X1))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 \\
 & \quad X2))) \Rightarrow (((k7_finseq_1 X0 X1 = k7_finseq_1 X2 X1) \vee (k7_finseq_1 X1 \\
 & \quad X0 = k7_finseq_1 X1 X2)) \Rightarrow (X0 = X2)))))) \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\
 & \quad X1 k1_hilbert1) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge \\
 & \quad (v1_finseq_1 X2))) \Rightarrow ((X0 = k7_finseq_1 X1 X2) \Rightarrow (X0 = X1)))) \tag{3}
 \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (6)$$

Assume the following.

$$v4_funct_1 k1_hilbert1 \quad (7)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v4_funct_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_hilbert1)\Rightarrow(v1_finseq_1 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xreal_0 X0) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_hilbert1) \Rightarrow ((k7_finseq_1 X0 X1 = k7_finseq_1 \\ & X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)))))) \end{aligned}$$