

t51_ltlaxio1
 (TMcasLrf7KD5WTBBo8Rc7Wbrsth2XkNSjVG)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_hilbert1 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r8_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_hilbert1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow ((r8_ltlaxio1 X3 \\ & (k3_hilbert1 (k4_ltlaxio1 X0 X1) X2)) \Rightarrow (r8_ltlaxio1 X3 (k3_hilbert1 \\ & X0 (k3_hilbert1 X1 X2))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow ((r8_ltlaxio1 X3 \\ & (k3_hilbert1 X0 (k3_hilbert1 X1 X2))) \Rightarrow (r8_ltlaxio1 X3 (k3_hilbert1 \\ & (k4_ltlaxio1 X0 X1) X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow (((r8_ltlaxio1 X3 \\ & (k3_hilbert1 X0 X1)) \wedge (r8_ltlaxio1 X3 (k3_hilbert1 X1 X2))) \Rightarrow (r8_ltlaxio1 \\ & X3 (k3_hilbert1 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k1_hilbert1) \wedge (m1_subset_1 X1 k1_hilbert1)) \Rightarrow (m1_subset_1 (k4_ltlaxio1 X0 X1) k1_hilbert1) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_hilbert1) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_hilbert1) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\ & k1_hilbert1)) \Rightarrow (((r8_ltlaxio1 X4 (k3_hilbert1 X0 (k3_hilbert1 \\ & X1 X2))) \wedge (r8_ltlaxio1 X4 (k3_hilbert1 X2 X3))) \Rightarrow (r8_ltlaxio1 X4 \\ & (k3_hilbert1 X0 (k3_hilbert1 X1 X3)))))))))) \end{aligned}$$