

t40_intpro_1 (TMbvPZPeiNQQFjJUo- hEXK4N4cNCEVZJm2wB)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_intpro_1 : \iota$ be given. Let $k3_intpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_intpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_intpro_1 : \iota$ be given. Let $v8_intpro_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_intpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_intpro_1 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (k3_intpro_1 (k4_intpro_1 (k3_intpro_1 X0 X1) \\ & X0) X1 \in k8_intpro_1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow ((\\ & (k3_intpro_1 X0 X1 \in k8_intpro_1) \wedge (k3_intpro_1 X1 X2 \in k8_intpro_1)) \Rightarrow \\ & (k3_intpro_1 X0 X2 \in k8_intpro_1)))) \end{aligned} \quad (2)$$

Assume the following.

$$v8_intpro_1 k8_intpro_1 \quad (3)$$

Assume the following.

$$m1_subset_1 k8_intpro_1 (k1_zfmisc_1 k1_intpro_1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1 X0 k1_intpro_1) \wedge (m1_subset_1 \\ & X1 k1_intpro_1)) \Rightarrow (m1_subset_1 (k4_intpro_1 X0 X1) k1_intpro_1) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1 X0 k1_intpro_1) \wedge (m1_subset_1 \\ & X1 k1_intpro_1)) \Rightarrow (m1_subset_1 (k3_intpro_1 X0 X1) k1_intpro_1) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_intpro_1)) \Rightarrow ((v8_intpro_1 \\
& X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 k1_intpro_1) \Rightarrow (\forall X3.(m1_subset_1 X3 k1_intpro_1) \Rightarrow ((\\
& k3_intpro_1 X1 (k3_intpro_1 X2 X1) \in X0) \wedge ((k3_intpro_1 (k3_intpro_1 \\
& X1 (k3_intpro_1 X2 X3)) (k3_intpro_1 (k3_intpro_1 X1 X2) (k3_intpro_1 \\
& X1 X3)) \in X0) \wedge ((k3_intpro_1 (k4_intpro_1 X1 X2) X1 \in X0) \wedge ((k3_intpro_1 \\
& (k4_intpro_1 X1 X2) X2 \in X0) \wedge ((k3_intpro_1 X1 (k3_intpro_1 X2 (k4_intpro_1 \\
& X1 X2)) \in X0) \wedge ((k3_intpro_1 X1 (k5_intpro_1 X1 X2) \in X0) \wedge ((k3_intpro_1 \\
& X2 (k5_intpro_1 X1 X2) \in X0) \wedge ((k3_intpro_1 (k3_intpro_1 X1 X3) (\\
& k3_intpro_1 (k3_intpro_1 X2 X3) (k3_intpro_1 (k5_intpro_1 X1 X2) \\
& X3)) \in X0) \wedge ((k3_intpro_1 k2_intpro_1 X1 \in X0) \wedge (((X1 \in X0) \wedge (k3_intpro_1 \\
& X1 X2 \in X0)) \Rightarrow (X2 \in X0))))))))))))) \\
& \tag{7}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow (k3_intpro_1 \\
& (k4_intpro_1 (k4_intpro_1 (k3_intpro_1 X0 X1) X0) X2) X1 \in k8_intpro_1)))
\end{aligned}$$