

l35\_intpro\_1  
(TMHJqw4aXzz8NU5aKcrbaUrqVvYQQsLL8s4)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_intpro\_1 : \iota$  be given. Let  $v8\_intpro\_1 : \iota \Rightarrow o$  be given. Let  $k7\_intpro\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_intpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_intpro\_1 : \iota$  be given. Let  $k5\_intpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_intpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (k3\_intpro\_1 k2\_intpro\_1 X1 \in k7\_intpro\_1 \\ & \quad X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & (\forall X3.(m1\_subset\_1 X3 k1\_intpro\_1) \Rightarrow (k3\_intpro\_1 (k3\_intpro\_1 \\ & \quad X1 X2) (k3\_intpro\_1 (k3\_intpro\_1 X3 X2) (k3\_intpro\_1 (k5\_intpro\_1 \\ & \quad \quad X1 X3) X2)) \in k7\_intpro\_1 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & \quad (k3\_intpro\_1 X1 (k5\_intpro\_1 X2 X1) \in k7\_intpro\_1 X0))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & \quad (k3\_intpro\_1 X1 (k5\_intpro\_1 X1 X2) \in k7\_intpro\_1 X0))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & (k3\_intpro\_1 X1 (k3\_intpro\_1 X2 (k4\_intpro\_1 X1 X2)) \in k7\_intpro\_1 \\ & \quad X0))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & (k3\_intpro\_1 (k4\_intpro\_1 X1 X2) X2 \in k7\_intpro\_1 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & (k3\_intpro\_1 (k4\_intpro\_1 X1 X2) X1 \in k7\_intpro\_1 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & (\forall X3.(m1\_subset\_1 X3 k1\_intpro\_1) \Rightarrow (k3\_intpro\_1 (k3\_intpro\_1 \\ & X1 (k3\_intpro\_1 X2 X3)) (k3\_intpro\_1 (k3\_intpro\_1 X1 X2) (k3\_intpro\_1 \\ & X1 X3)) \in k7\_intpro\_1 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & (k3\_intpro\_1 X1 (k3\_intpro\_1 X2 X1) \in k7\_intpro\_1 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow \\ & (((X1 \in k7\_intpro\_1 X0) \wedge (k3\_intpro\_1 X1 X2 \in k7\_intpro\_1 X0)) \Rightarrow ( \\ & X2 \in k7\_intpro\_1 X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (m1\_subset\_1 \\ & (k7\_intpro\_1 X0) (k1\_zfmisc\_1 k1\_intpro\_1)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow ((v8\_intpro\_1 \\
& X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 k1\_intpro\_1) \Rightarrow (\forall X3.(m1\_subset\_1 X3 k1\_intpro\_1) \Rightarrow (( \\
& k3\_intpro\_1 X1 (k3\_intpro\_1 X2 X1) \in X0) \wedge ((k3\_intpro\_1 (k3\_intpro\_1 \\
& X1 (k3\_intpro\_1 X2 X3)) (k3\_intpro\_1 (k3\_intpro\_1 X1 X2) (k3\_intpro\_1 \\
& X1 X3)) \in X0) \wedge ((k3\_intpro\_1 (k4\_intpro\_1 X1 X2) X1 \in X0) \wedge ((k3\_intpro\_1 \\
& (k4\_intpro\_1 X1 X2) X2 \in X0) \wedge ((k3\_intpro\_1 X1 (k3\_intpro\_1 X2 (k4\_intpro\_1 \\
& X1 X2)) \in X0) \wedge ((k3\_intpro\_1 X1 (k5\_intpro\_1 X1 X2) \in X0) \wedge ((k3\_intpro\_1 \\
& X2 (k5\_intpro\_1 X1 X2) \in X0) \wedge ((k3\_intpro\_1 (k3\_intpro\_1 X1 X3) ( \\
& k3\_intpro\_1 (k3\_intpro\_1 X2 X3) (k3\_intpro\_1 (k5\_intpro\_1 X1 X2) \\
& X3)) \in X0) \wedge ((k3\_intpro\_1 k2\_intpro\_1 X1 \in X0) \wedge (((X1 \in X0) \wedge (k3\_intpro\_1 \\
& X1 X2 \in X0)) \Rightarrow (X2 \in X0)))))))))))))
\end{aligned} \tag{12}$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (v8\_intpro\_1 (k7\_intpro\_1 X0))$$