

## t79\_intpro\_1

(TMU7kxbMfDZTWRFffkMzTza1gKsioPmdJTA)

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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  $v10\_intpro\_1 : \iota \Rightarrow o$  be given. Let  $v8\_intpro\_1 : \iota \Rightarrow o$  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  $k5\_intpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_intpro\_1 : \iota$  be given. Let  $k6\_intpro\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow ((v10\_intpro\_1 \\
 & \quad X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 \\
 & \quad \quad X2 k1\_intpro\_1) \Rightarrow (\forall X3.(m1\_subset\_1 X3 k1\_intpro\_1) \Rightarrow (( \\
 & \quad \quad \quad k3\_intpro\_1 X1 (k3\_intpro\_1 X2 X1) \in X0) \wedge ((k3\_intpro\_1 (k3\_intpro\_1 \\
 & \quad \quad \quad X1 (k3\_intpro\_1 X2 X3)) (k3\_intpro\_1 (k3\_intpro\_1 X1 X2) (k3\_intpro\_1 \\
 & \quad \quad \quad X1 X3)) \in X0) \wedge ((k3\_intpro\_1 (k4\_intpro\_1 X1 X2) X1 \in X0) \wedge ((k3\_intpro\_1 \\
 & \quad \quad \quad (k4\_intpro\_1 X1 X2) X2 \in X0) \wedge ((k3\_intpro\_1 X1 (k3\_intpro\_1 X2 (k4\_intpro\_1 \\
 & \quad \quad \quad X1 X2)) \in X0) \wedge ((k3\_intpro\_1 X1 (k5\_intpro\_1 X1 X2) \in X0) \wedge ((k3\_intpro\_1 \\
 & \quad \quad \quad X2 (k5\_intpro\_1 X1 X2) \in X0) \wedge ((k3\_intpro\_1 (k3\_intpro\_1 X1 X3) ( \\
 & \quad \quad \quad k3\_intpro\_1 (k3\_intpro\_1 X2 X3) (k3\_intpro\_1 (k5\_intpro\_1 X1 X2) \\
 & \quad \quad \quad X3)) \in X0) \wedge ((k3\_intpro\_1 k2\_intpro\_1 X1 \in X0) \wedge ((k5\_intpro\_1 X1 \\
 & \quad \quad \quad (k3\_intpro\_1 X1 k2\_intpro\_1) \in X0) \wedge ((k3\_intpro\_1 (k6\_intpro\_1 \\
 & \quad \quad \quad (k3\_intpro\_1 X1 X2)) (k3\_intpro\_1 (k6\_intpro\_1 X1) (k6\_intpro\_1 \\
 & \quad \quad \quad X2)) \in X0) \wedge ((k3\_intpro\_1 (k6\_intpro\_1 X1) X1 \in X0) \wedge ((k3\_intpro\_1 \\
 & \quad \quad \quad (k6\_intpro\_1 X1) (k6\_intpro\_1 (k6\_intpro\_1 X1)) \in X0) \wedge (((X1 \in \\
 & \quad \quad \quad X0) \wedge (k3\_intpro\_1 X1 X2 \in X0)) \Rightarrow (X2 \in X0)) \wedge ((X1 \in X0) \Rightarrow (k6\_intpro\_1 \\
 & \quad \quad \quad X1 \in X0)))))))))))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow ((v8\_intpro\_1 \\
& X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 k1\_intpro\_1) \Rightarrow (\forall X3.(m1\_subset\_1 X3 k1\_intpro\_1) \Rightarrow (( \\
& k3\_intpro\_1 X1 (k3\_intpro\_1 X2 X1) \in X0) \wedge ((k3\_intpro\_1 (k3\_intpro\_1 \\
& X1 (k3\_intpro\_1 X2 X3)) (k3\_intpro\_1 (k3\_intpro\_1 X1 X2) (k3\_intpro\_1 \\
& X1 X3)) \in X0) \wedge ((k3\_intpro\_1 (k4\_intpro\_1 X1 X2) X1 \in X0) \wedge ((k3\_intpro\_1 \\
& (k4\_intpro\_1 X1 X2) X2 \in X0) \wedge ((k3\_intpro\_1 X1 (k3\_intpro\_1 X2 (k4\_intpro\_1 \\
& X1 X2)) \in X0) \wedge ((k3\_intpro\_1 X1 (k5\_intpro\_1 X1 X2) \in X0) \wedge ((k3\_intpro\_1 \\
& X2 (k5\_intpro\_1 X1 X2) \in X0) \wedge ((k3\_intpro\_1 (k3\_intpro\_1 X1 X3) ( \\
& k3\_intpro\_1 (k3\_intpro\_1 X2 X3) (k3\_intpro\_1 (k5\_intpro\_1 X1 X2) \\
& X3)) \in X0) \wedge ((k3\_intpro\_1 k2\_intpro\_1 X1 \in X0) \wedge (((X1 \in X0) \wedge (k3\_intpro\_1 \\
& X1 X2 \in X0)) \Rightarrow (X2 \in X0)))))))))))))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow ((v10\_intpro\_1 X0) \Rightarrow (v8\_intpro\_1 X0))$$