

t80\_intpro\_1 (TM-  
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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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k11\_intpro\_1 : \iota \Rightarrow \iota$  be given. Let  $k13\_intpro\_1 : \iota \Rightarrow \iota$  be given. Let  $v10\_intpro\_1 : \iota \Rightarrow o$  be given. Let  $v9\_intpro\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow ((v10\_intpro\_1 X0) \Rightarrow (v9\_intpro\_1 X0)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (m1\_subset\_1 (k13\_intpro\_1 X0) (k1\_zfmisc\_1 k1\_intpro\_1)) \quad (4)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (m1\_subset\_1 (k11\_intpro\_1 X0) (k1\_zfmisc\_1 k1\_intpro\_1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow ((X1 = k13\_intpro\_1 \\ & X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow ((X2 \in X1) \Leftrightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (((v10\_intpro\_1 \\ & X3) \wedge (r1\_tarski X0 X3)) \Rightarrow (X2 \in X3)))))) \quad (7) \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (\forall X1. \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow ((X1 = k11\_intpro\_1 \\
& X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 k1\_intpro\_1) \Rightarrow ((X2 \in X1) \Leftrightarrow (\forall X3. \\
& (m1\_subset\_1 X3 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (((v9\_intpro\_1 X3) \wedge \\
& (r1\_tarski X0 X3)) \Rightarrow (X2 \in X3))))))
\end{aligned} \tag{8}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_intpro\_1)) \Rightarrow (r1\_tarski \\
& (k11\_intpro\_1 X0) (k13\_intpro\_1 X0))
\end{aligned}$$