

t169\_relat\_1 (TMKHVnXeBALgmJtqFMn-  
bZtEcLY8tHVLgRMF)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (X1 = k1\_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. k9\_relat\_1 X0 X1 = k7\_relat\_1 X0 (k1\_tarski X1)) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. \forall X2. (X2 = k7\_relat\_1 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. (k4\_tarski X4 X3 \in X0) \wedge (X4 \in X1)))) \quad (3)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((k4\_tarski X0 X1 \in X2) \Leftrightarrow (X1 \in k9\_relat\_1 X2 X0))$$