

t143\_relat\_1 (TM-  
SEAmV2W9yemYRa8T1eQqauypmLTyq6Nhf)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. \forall X2. (X2 = k8\_relat\_1 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. (k4\_tarski X3 X4 \in X0) \wedge (X4 \in X1)))) \quad (2)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (r1\_tarski (k8\_relat\_1 X2 X0) (k8\_relat\_1 X2 X1)))$$