

t13\_relat\_2  
(TMU7enZyXiGz7MGGzJuHdWeRAV2FSdVTTZA)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_relat\_2 : \iota \Rightarrow o$  be given. Let  $k2\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $r3\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((k4\_tarski X0 X1 \in X2) \Rightarrow ((X0 \in k1\_relat\_1 X2) \wedge (X1 \in k1\_relat\_1 X2))) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (v1\_relat\_1 X1) \Rightarrow ((X1 = k2\_relat\_1 X0) \Leftrightarrow (\forall X2. \forall X3. (k4\_tarski X2 X3 \in X1) \Leftrightarrow (k4\_tarski X3 X2 \in X0)))) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (r3\_relat\_2 X0 X1) \Leftrightarrow (\forall X2. \forall X3. ((X2 \in X1) \wedge ((X3 \in X1) \wedge (k4\_tarski X2 X3 \in X0))) \Rightarrow (k4\_tarski X3 X2 \in X0))) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow ((v3\_relat\_2 X0) \Leftrightarrow (r3\_relat\_2 X0 (k1\_relat\_1 X0))) \quad (4)$$

**Theorem 1**  $\forall X0. (v1\_relat\_1 X0) \Rightarrow ((v3\_relat\_2 X0) \Leftrightarrow (X0 = k2\_relat\_1 X0)).$