

t75\_relat\_1  
(TMQ1G4UMHrzvXSbBFQLHdNdbab3ov1wUhUV)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (k5\_relat\_1 (k5\_relat\_1 X2 X1) X0 = k5\_relat\_1 X2 X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (r1\_tarski (k5\_relat\_1 X1 X0) X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X0) \Rightarrow (v1\_relat\_1 (k5\_relat\_1 X0 X1)) \quad (3)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (r1\_tarski (k5\_relat\_1 X2 X0) (k5\_relat\_1 X2 X1)))$$