

t77\_relat\_1

(TMd9qadnMS7G46ram3JpZU6AEzZG5h4hPHN)

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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.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (r1\_tarski (k5\_relat\_1 X2 X0) (k5\_relat\_1 X2 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (3)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow (\forall X3. (v1\_relat\_1 X3) \Rightarrow (((r1\_tarski X2 X3) \wedge (r1\_tarski X0 X1)) \Rightarrow (r1\_tarski (k5\_relat\_1 X2 X0) (k5\_relat\_1 X3 X1))))$$