

t13\_relset\_2  
(TMGd6ZNWpTgtXLFANxG6e15HSjhXTPWu8Ch)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_eqrel\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X0 X2)) \Rightarrow (r1\_tarski X0 (k3\_xboole\_0 X1 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski (k3\_xboole\_0 X0 X1) X0 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r1\_tarski (k7\_relat\_1 X1 X0) (k7\_relat\_1 X2 X0)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X0) \Rightarrow (v1\_relat\_1 (k3\_xboole\_0 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \quad (5)$$

**Theorem 1**

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. (v1\_relat\_1 X2) \Rightarrow (r1\_tarski (k7\_relat\_1 (k3\_xboole\_0 X1 X2) (k10\_eqrel\_1 X0)) (k3\_xboole\_0 (k7\_relat\_1 X1 (k10\_eqrel\_1 X0)) (k7\_relat\_1 X2 (k10\_eqrel\_1 X0))))))$$