

## t96\_relat\_1

(TMcAoeUkMhiaPvFhQCUht9FjCpXzVqiTjCX)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k6\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (v1\_relat\_1 (k6\_relat\_1 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k3\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. (v1\_relat\_1 X2) \Rightarrow ((X2 = k6\_relat\_1 X0 X1) \Leftrightarrow (\forall X3. \forall X4. (k4\_tarSKI X3 X4 \in X2) \Leftrightarrow ((X4 \in X0) \wedge (k4\_tarSKI X3 X4 \in X1))))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \quad (4)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow (k6\_relat\_1 X0 (k6\_relat\_1 X1 X2) = k6\_relat\_1 (k3\_xboole\_0 X0 X1) X2)$$