

t79\_relat\_1 (TM-  
PhjWyQ3T8NK19zhkkV26xkW92X6rGtECw)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (k5\_relat\_1 X1 X0 = k3\_xboole\_0 X1 (k2\_zfmisc\_1 X0 (k10\_xtuple\_0 X1))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k3\_xboole\_0 (k3\_xboole\_0 X0 X1) X2 = k3\_xboole\_0 X0 (k3\_xboole\_0 X1 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k3\_xboole\_0 X0 (k3\_xboole\_0 X1 X2) = k3\_xboole\_0 (k3\_xboole\_0 X0 X1) (k3\_xboole\_0 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. k2\_zfmisc\_1 (k3\_xboole\_0 X0 X1) (k3\_xboole\_0 X2 X3) = k3\_xboole\_0 (k2\_zfmisc\_1 X0 X2) (k2\_zfmisc\_1 X1 X3) \quad (4)$$

Assume the following.

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

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow (k5\_relat\_1 X2 (k3\_xboole\_0 X0 X1) = k3\_xboole\_0 (k5\_relat\_1 X2 X0) (k5\_relat\_1 X2 X1))$$