

t8\_funct\_1 (TMciCWVLAy-  
LuiC71zxbmXc6HDsXZRCajmoL)

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Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(X0 \neq k1\_xboole\_0) \Rightarrow (\forall X1.\exists X2.((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \wedge ((k9\_xtuple\_0 X2 = X0) \wedge (k10\_xtuple\_0 X2 = k1\_tarski X1))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow ((k9\_xtuple\_0 X0 = k1\_xboole\_0) \Leftrightarrow (k10\_xtuple\_0 X0 = k1\_xboole\_0)) \quad (2)$$

Assume the following.

$$\forall X0.r1\_tarski k1\_xboole\_0 X0 \quad (3)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\exists X1.(X1 \in X0) \wedge (r1\_xboole\_0 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0 : \iota \Rightarrow \iota.\forall X1.\exists X2.((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \wedge ((k9\_xtuple\_0 X2 = X1) \wedge (\forall X3.(X3 \in X1) \Rightarrow (k1\_funct\_1 X2 X3 = X0 X3))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski (k1\_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (7)$$

Assume the following.

$$k1\_xboole\_0 = the (\lambda X0 : \iota.v1\_xboole\_0 X0) \quad (8)$$

**Theorem 1**

$$\forall X0. \forall X1. \neg(\neg(X0 = k1\_xboole\_0) \wedge (X1 \neq k1\_xboole\_0)) \wedge \\ (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (\neg(X1 = k9\_xtuple\_0 \\ X2) \wedge (r1\_tarski (k10\_xtuple\_0 X2) X0)))$$