

t2\_grcat\_1  
(TMTyGf8xWLbj8jjYMhfdQaKcsMdfzNUXfJc)

October 27, 2020

Let  $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_funct\_5 : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_funct\_5 : \iota$  be given. Let  $k5\_funct\_5 : \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4\_tarski X0 X1 \in k2\_zfmisc\_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 X0 (k1\_tarski X1)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 (k1\_tarski X1)))))) \Rightarrow ((X2 \in X0) \Rightarrow (k1\_funct\_1 X3 X2 = X1)) \quad (2)$$

Assume the following.

$$np\_1 = k1\_tarski k1\_xboole\_0 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4\_tarski X0 X1 \in k2\_zfmisc\_1 (k1\_tarski X2) (k1\_tarski X3)) \Leftrightarrow ((X0 = X2) \wedge (X1 = X3)) \quad (4)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (5)$$

Assume the following.

$$k5\_funct\_5 = k1\_xboole\_0 \quad (6)$$

Assume the following.

$$k1\_binop\_1 k9\_funct\_5 k1\_xboole\_0 k1\_xboole\_0 = k6\_numbers \quad (7)$$

Assume the following.

$$(v1\_funct\_1 \ k8\_funct\_5) \wedge ((v1\_funct\_2 \ k8\_funct\_5 \ np\_1 \ np\_1) \wedge (m1\_subset\_1 \ k8\_funct\_5 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ np\_1 \ np\_1)))) \quad (8)$$

**Theorem 1**

$$(k1\_binop\_1 \ k9\_funct\_5 \ k1\_xboole\_0 \ k1\_xboole\_0 = k1\_xboole\_0) \wedge ((k1\_funct\_1 \ k8\_funct\_5 \ k1\_xboole\_0 = k1\_xboole\_0) \wedge (k5\_funct\_5 = k1\_xboole\_0))$$