

t17\_card\_3 (TM-  
ToC7KcuVkW3T1FwBnwnVCJPv12vEAMgnE)

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Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_card\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k5\_card\_3 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow (\exists X4. ((v1\_relat\_1 X4) \wedge (v1\_funct\_1 X4)) \wedge ((X4 \in X1) \wedge (X3 = k1\_funct\_1 X4 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k3\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow \\ & (X2 \in X1)) \end{aligned} \quad (3)$$

Assume the following.

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

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. r1\_tarski (k5\_card\_3 X2 (k3\_xboole\_0 \\ & X0 X1)) (k3\_xboole\_0 (k5\_card\_3 X2 X0) (k5\_card\_3 X2 X1)) \end{aligned}$$