

l17\_grfunc\_1  
(TMRCtoiF9GAiQjXfUkbqAT5bMJfX6ahdwpu)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k9\_xtuple\_0 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. k4\_tarski X2 X3 \in X0)) \quad (2)$$

**Theorem 1**

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge (v1\_funct\_1 X3)) \Rightarrow ((X1 = k2\_xboole\_0 X2 X3) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \Leftrightarrow ((X0 \in k9\_xtuple\_0 X2) \vee (X0 \in k9\_xtuple\_0 X3))))))$$