

t64\_funct\_2  
(TMcoREHmWQLthksfmuoQuWAzoo66sdjijmi)

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Let  $v1\_funct.1 : \iota \Rightarrow o$  be given. Let  $v1\_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc.1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole.0 : \iota \Rightarrow o$  be given. Let  $v1\_relat.1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple.0 : \iota \Rightarrow \iota$  be given. Let  $k7\_relat.1 : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1\_subset.1 X1 (k1\_zfmisc.1 X2)) \wedge (v1\_xboole.0 X2)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset.1 X1 (k1\_zfmisc.1 X2))) \Rightarrow (m1\_subset.1 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat.1 X2) \wedge (v1\_funct.1 X2)) \Rightarrow ((k4\_tarski X0 X1 \in X2) \Leftrightarrow ((X0 \in k9\_xtuple.0 X2) \wedge (X1 = k1\_funct.1 X2 X0))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (m1\_subset.1 X2 (k1\_zfmisc.1 (k2\_zfmisc.1 X0 X1))) \Rightarrow (k7\_relset.1 X0 X1 X2 X3 = k7\_relat.1 X2 X3) \quad (5)$$

Assume the following.

$$\forall X0. ((v1\_relat.1 X0) \wedge (v1\_funct.1 X0)) \Rightarrow (\forall X1. \forall X2. (X2 = k7\_relat.1 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. (X4 \in k9\_xtuple.0 X0) \wedge ((X4 \in X1) \wedge (X3 = k1\_funct.1 X0 X4))))) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \Rightarrow ((m1\_subset\_1 X1 X0) \Leftrightarrow \\ & (X1 \in X0))) \wedge ((v1\_xboole\_0 X0) \Rightarrow ((m1\_subset\_1 X1 X0) \Leftrightarrow (v1\_xboole\_0 \\ & X1))) \end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \end{aligned} \tag{8}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1 X3) \wedge \\ & ((v1\_funct\_2 X3 X0 X1) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))) \Rightarrow (\forall X4. \neg (X4 \in k7\_relset\_1 X0 X1 X3 X2) \wedge (\forall X5. \\ & \neg (X5 \in X0) \wedge ((X5 \in X2) \wedge (X4 = k1\_funct\_1 X3 X5)))) \end{aligned}$$