

t28\_funct\_2  
(TMdfj7c41HJcmjkrBPca1R3EubL4oTUnBes)

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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  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v2\_funct\_1 X0) \Rightarrow \\ & (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((X1 = k2\_funct\_1 \\ & X0) \Leftrightarrow ((k9\_xtuple\_0 X1 = k10\_xtuple\_0 X0) \wedge (\forall X2. \forall X3. \\ & (((X2 \in k10\_xtuple\_0 X0) \wedge (X3 = k1\_funct\_1 X1 X2)) \Rightarrow ((X3 \in k9\_xtuple\_0 \\ & X0) \wedge (X2 = k1\_funct\_1 X0 X3))) \wedge (((X3 \in k9\_xtuple\_0 X0) \wedge (X2 = k1\_funct\_1 \\ & X0 X3)) \Rightarrow ((X2 \in k10\_xtuple\_0 X0) \wedge (X3 = k1\_funct\_1 X1 X2)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v5\_relat\_1 X1 X0)) \Rightarrow (k2\_relset\_1 X0 X1 = k10\_xtuple\_0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))) \Rightarrow (((X1 \neq k1\_xboole\_0) \Rightarrow ((v1\_funct\_2 X2 X0 \\ & X1) \Leftrightarrow (X0 = k1\_relset\_1 X0 X2))) \wedge ((X1 = k1\_xboole\_0) \Rightarrow ((v1\_funct\_2 \\ & X2 X0 X1) \Leftrightarrow (X2 = k1\_xboole\_0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1\_funct\_1 X2)\wedge((v1\_funct\_2 \\ & X2 X0 X1)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow \\ & (\forall X3.((v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 X1 X0)\wedge(m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X0))))\Rightarrow(((k2\_relset\_1 X1 X2 = \\ & X1)\wedge((v2\_funct\_1 X2)\wedge(\forall X4.\forall X5.(((X4 \in X1)\wedge(k1\_funct\_1 \\ & X3 X4 = X5))\Rightarrow((X5 \in X0)\wedge(k1\_funct\_1 X2 X5 = X4))\wedge(((X5 \in X0)\wedge(k1\_funct\_1 \\ & X2 X5 = X4))\Rightarrow((X4 \in X1)\wedge(k1\_funct\_1 X3 X4 = X5))))))\Rightarrow((X0 = k1\_xboole\_0)\vee \\ & ((X1 = k1\_xboole\_0)\vee(X3 = k2\_funct\_1 X2)))))) \end{aligned}$$