

t73\_valued\_2 (TMLk-  
mXdPBT8ngZprmKx7CUkJqFAhMD66b36)

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Let  $v1\_valued\_2 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  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  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k69\_valued\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_valued\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_valued\_2 : \iota \Rightarrow \iota$  be given. Let  $k63\_valued\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k50\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k68\_valued\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k62\_valued\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k35\_valued\_1 : \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1\_valued\_2 X1) \Rightarrow (\forall X2. ((v1\_funct\_1 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow (\forall X3. \\ & ((v1\_relat\_1 X3) \wedge ((v1\_funct\_1 X3) \wedge (v1\_valued\_0 X3)))) \Rightarrow (\forall X4. \\ & ((v1\_relat\_1 X4) \wedge ((v1\_funct\_1 X4) \wedge (v1\_valued\_0 X4)))) \Rightarrow (k63\_valued\_2 \\ & (k3\_xboole\_0 X0 (k9\_xtuple\_0 X3)) (k2\_valued\_2 (k1\_valued\_2 X1)) \\ & (k63\_valued\_2 X0 X1 X2 X3) X4 = k63\_valued\_2 X0 X1 X2 (k18\_valued\_1 \\ & X3 X4)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_valued\_2 X1) \wedge \\ & (((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))) \wedge ((v1\_relat\_1 X3) \wedge ((v1\_funct\_1 X3) \wedge (v1\_valued\_0 X3)))) \Rightarrow \\ & (k69\_valued\_2 X0 X1 X2 X3 = k68\_valued\_2 X1 X2 X3) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_valued\_2 X1) \wedge \\ & (((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))) \wedge ((v1\_relat\_1 X3) \wedge ((v1\_funct\_1 X3) \wedge (v1\_valued\_0 X3)))) \Rightarrow \\ & (k63\_valued\_2 X0 X1 X2 X3 = k62\_valued\_2 X1 X2 X3) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.v1\_valued\_2 (k2\_valued\_2 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1\_valued\_2 X1)\wedge \\ & (((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1))))\wedge((v1\_relat\_1 X3)\wedge((v1\_funct\_1 X3)\wedge(v1\_valued\_0 X3))))))\Rightarrow \\ & ((v1\_funct\_1 (k63\_valued\_2 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k63\_valued\_2 \\ & X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k3\_xboole\_0 X0 (k9\_xtuple\_0 \\ & X3)) (k2\_valued\_2 (k1\_valued\_2 X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 X0)))\Rightarrow \\ & ((v1\_relat\_1 (k35\_valued\_1 X0))\wedge((v1\_funct\_1 (k35\_valued\_1 \\ & X0))\wedge(v1\_valued\_0 (k35\_valued\_1 X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_valued\_2 X0)\Rightarrow(\forall X1.((v1\_relat\_1 X1)\wedge(( \\ & v5\_relat\_1 X1 X0)\wedge(v1\_funct\_1 X1)))\Rightarrow(\forall X2.((v1\_relat\_1 \\ & X2)\wedge((v1\_funct\_1 X2)\wedge(v1\_valued\_0 X2)))\Rightarrow(k68\_valued\_2 X0 X1 \\ & X2 = k62\_valued\_2 X0 X1 (k35\_valued\_1 X2)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 X0)))\Rightarrow \\ & (\forall X1.((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_valued\_0 \\ & X1)))\Rightarrow(k50\_valued\_1 X0 X1 = k18\_valued\_1 X0 (k35\_valued\_1 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \end{aligned} \quad (11)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.(v1\_valued\_2 X1)\Rightarrow(\forall X2.((v1\_funct\_1 \\ & X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(\forall X3. \\ & ((v1\_relat\_1 X3)\wedge((v1\_funct\_1 X3)\wedge(v1\_valued\_0 X3)))\Rightarrow(\forall X4. \\ & ((v1\_relat\_1 X4)\wedge((v1\_funct\_1 X4)\wedge(v1\_valued\_0 X4)))\Rightarrow(k69\_valued\_2 \\ & (k3\_xboole\_0 X0 (k9\_xtuple\_0 X3)) (k2\_valued\_2 (k1\_valued\_2 X1)) \\ & (k63\_valued\_2 X0 X1 X2 X3) X4 = k63\_valued\_2 X0 X1 X2 (k50\_valued\_1 \\ & X3 X4)))))) \end{aligned}$$