

t68\_cfunct\_1 (TMGArTr-  
Uscg6AR1DcPxKJ2CQPvewFpYFHBR)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_numbers : \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_cfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_cfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k8\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ( \\ m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers)))) \Rightarrow ( \\ \forall X2. ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ X0 k2\_numbers)))) \Rightarrow (((v1\_partfun1 X1 X0) \wedge ((k8\_relset\_1 X0 k2\_numbers \\ X2 (k1\_tarski k6\_numbers) = k1\_xboole\_0) \wedge (v1\_partfun1 X2 X0))) \Leftrightarrow \\ (v1\_partfun1 (k1\_cfunct\_1 X0 X1 X2) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ( \\ m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers)))) \Rightarrow ( \\ (v1\_partfun1 (k2\_cfunct\_1 X0 X1) X0) \Leftrightarrow ((k8\_relset\_1 X0 k2\_numbers \\ X1 (k1\_tarski k6\_numbers) = k1\_xboole\_0) \wedge (v1\_partfun1 X1 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge(((v1\_funct\_1 \\ & X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers))))\wedge \\ & ((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 \\ & k2\_numbers))))))\Rightarrow((v1\_funct\_1 (k1\_cfunct\_1 X0 X1 X2))\wedge(m1\_subset\_1 \\ & (k1\_cfunct\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\Rightarrow( \\ & (v1\_partfun1 X1 X0)\Leftrightarrow(k1\_relset\_1 X0 X1 = X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge( \\ & m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers))))\Rightarrow( \\ & \forall X2.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 k2\_numbers))))\Rightarrow(\forall X3.((v1\_funct\_1 X3)\wedge(m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers))))\Rightarrow((X3 = k1\_cfunct\_1 \\ & X0 X1 X2)\Leftrightarrow((k1\_relset\_1 X0 X3 = k9\_subset\_1 X0 (k1\_relset\_1 X0 X1) \\ & (k7\_subset\_1 X0 (k1\_relset\_1 X0 X2) (k8\_relset\_1 X0 k2\_numbers \\ & X2 (k1\_tarski k6\_numbers))))\wedge(\forall X4.(m1\_subset\_1 X4 X0)\Rightarrow \\ & ((X4 \in k1\_relset\_1 X0 X3)\Rightarrow(k7\_partfun1 k2\_numbers X3 X4 = k9\_complex1 \\ & (k7\_partfun1 k2\_numbers X1 X4) (k12\_complex1 (k7\_partfun1 k2\_numbers \\ & X2 X4)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \end{aligned} \quad (7)$$

Assume the following.

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

### Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow \\ & (\forall X2.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 k2\_numbers))))\Rightarrow(\forall X3.((v1\_funct\_1 X3)\wedge(m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k2\_numbers))))\Rightarrow(((v1\_partfun1 \\ & X2 X0)\wedge(v1\_partfun1 (k2\_cfunct\_1 X0 X3) X0))\Rightarrow(k7\_partfun1 k2\_numbers \\ & (k1\_cfunct\_1 X0 X2 X3) X1 = k9\_complex1 (k7\_partfun1 k2\_numbers \\ & X2 X1) (k12\_complex1 (k7\_partfun1 k2\_numbers X3 X1)))))) \end{aligned}$$