

# t60\_rfunct\_1 (TMVhXwNDBSsXYUPtP- pXsyTc9t2qWzjWXEFc)

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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  $k1\_numbers : \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_rfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_rfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k18\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_rfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_rfunct\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_valued\_0 X0))) \Rightarrow \\ (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_valued\_0 \\ X1))) \Rightarrow (\forall X2.k1\_funct\_1 (k18\_valued\_1 X0 X1) X2 = k3\_xcmplx\_0 \\ (k1\_funct\_1 X0 X2) (k1\_funct\_1 X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow \\ (\forall X2.((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ X0 k1\_numbers)))) \Rightarrow ((v1\_partfun1 (k6\_rfunct\_1 X0 k1\_numbers X2) \\ X0) \Rightarrow (k1\_funct\_1 (k6\_rfunct\_1 X0 k1\_numbers X2) X1 = k5\_xcmplx\_0 \\ (k1\_funct\_1 X2 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_valued\_0 X0))) \Rightarrow \\ (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_valued\_0 \\ X1))) \Rightarrow (k1\_rfunct\_1 X0 X1 = k18\_valued\_1 X0 (k4\_rfunct\_1 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v3\_membered X1) \wedge ((v1\_funct\_1 \\ X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow (k6\_rfunct\_1 \\ X0 X1 X2 = k4\_rfunct\_1 X2)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3\_membered\ X1)\wedge \\ & (((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1 \\ & X0\ X1))))\wedge((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1 \\ & X0\ X1))))))\Rightarrow(k3\_rfuncnt\_1\ X0\ X1\ X2\ X3 = k1\_rfuncnt\_1\ X2\ X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\Rightarrow \\ & ((v1\_relat\_1\ (k4\_rfuncnt\_1\ X0))\wedge((v1\_funct\_1\ (k4\_rfuncnt\_1\ X0))\wedge \\ & (v3\_valued\_0\ (k4\_rfuncnt\_1\ X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow \\ & ((v1\_relat\_1\ (k4\_rfuncnt\_1\ X0))\wedge((v1\_funct\_1\ (k4\_rfuncnt\_1\ X0))\wedge \\ & (v1\_valued\_0\ (k4\_rfuncnt\_1\ X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$v3\_membered\ k1\_numbers \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v3\_membered\ X1)\wedge((v1\_funct\_1 \\ & X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((v1\_funct\_1 \\ & (k6\_rfuncnt\_1\ X0\ X1\ X2))\wedge(m1\_subset\_1\ (k6\_rfuncnt\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0))\Rightarrow((v1\_relat\_1 \\ & X0)\wedge(v1\_valued\_0\ X0)) \end{aligned} \quad (10)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v3\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1 \\ & X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v3\_valued\_0\ X2)) \end{aligned} \quad (12)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow \\ & (\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1 \\ & X0\ k1\_numbers))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge(m1\_subset\_1 \\ & X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))\Rightarrow(((v1\_partfun1 \\ & X2\ X0)\wedge(v1\_partfun1\ (k6\_rfuncnt\_1\ X0\ k1\_numbers\ X3)\ X0))\Rightarrow(k1\_funct\_1 \\ & (k3\_rfuncnt\_1\ X0\ k1\_numbers\ X2\ X3)\ X1 = k3\_xcmplx\_0\ (k1\_funct\_1\ X2 \\ & X1)\ (k5\_xcmplx\_0\ (k1\_funct\_1\ X3\ X1)))))) \end{aligned}$$