t13_rfunct_2 (TMHc6cXwt5va4PfxyYJmBLXAJ5RsDR7tp4j)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ 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 $k1\_numbers : \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k47\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ 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.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ k5\_numbers\ X0) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \Rightarrow ((r1\_tarski\ (k2\_relset\_1\ X0\ X3)\ (k9\_subset\_1\ X0\ (k1\_relset\_1\ X0\ X1)\ (k1\_relset\_1\ X0\ X2))) \Rightarrow ((r2\_relset\_1\ k5\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ (k3\_valued\_1\ X0\ k1\_numbers\ k1\_numbers\ X1\ X2))\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X1)\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X2))) \wedge ((r2\_relset\_1\ k5\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ (k47\_valued\_1\ X0\ k1\_numbers\ k1\_numbers\ X1\ X2))\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X1)\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X2))) \wedge (r2\_relset\_1\ k5\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ (k20\_valued\_1\ X0\ k1\_numbers\ k1\_numbers\ X1\ X2))\ (k20\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X1)\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X2))))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1))\Leftrightarrow(r1\_tarski\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0))\Rightarrow(k9\_subset\_1\ X0\ X1\ X2 = k3\_xboole\_0\ X1\ X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0\ X0\ X0 = X0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v5\_relat\_1\ X1\ X0))\Rightarrow(m1\_subset\_1\ (k2\_relset\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(m1\_subset\_1\ (k1\_relset\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow((v1\_partfun1\ X1\ X0)\Leftrightarrow(k1\_relset\_1\ X0\ X1 = X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{9}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ X0)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0)))))\Rightarrow(((v1\_partfun1\ X1\ X0)\wedge(v1\_partfun1\ X2\ X0))\Rightarrow((r2\_relset\_1\ k5\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ (k3\_valued\_1\ X0\ k1\_numbers\ k1\_numbers\ X1\ X2))\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X1)\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X2)))\wedge((r2\_relset\_1\ k5\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ (k47\_valued\_1\ X0\ k1\_numbers\ k1\_numbers\ X1\ X2))\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X1)\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X2)))\wedge(r2\_relset\_1\ k5\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ (k20\_valued\_1\ X0\ k1\_numbers\ k1\_numbers\ X1\ X2))\ (k20\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X1)\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ X0\ X3\ X2)))))))))$$