t51_rfunct_1 (TMFR24EtABzYr1SMcUScNXCLqhCXbntxS2k)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ 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 $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k26\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $v1\_valued\_0 : \iota \Rightarrow o$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_membered : \iota \Rightarrow o$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3\_membered\ X1)\wedge (((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge(v1\_xreal\_0\ X3)))\Rightarrow(k26\_valued\_1\ X0\ X1\ X2\ X3 = k24\_valued\_1\ X2\ X3) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\wedge(v1\_xreal\_0\ X1))\Rightarrow((v1\_relat\_1\ (k24\_valued\_1\ X0\ X1))\wedge((v1\_funct\_1\ (k24\_valued\_1\ X0\ X1))\wedge(v3\_valued\_0\ (k24\_valued\_1\ X0\ X1)))) \tag{3}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge(v1\_valued\_0\ X1)))))\wedge(v1\_xcmplx\_0\ X2))\Rightarrow((v1\_relat\_1\ (k24\_valued\_1\ X1\ X2))\wedge((v1\_funct\_1\ (k24\_valued\_1\ X1\ X2))\wedge(v1\_partfun1\ (k24\_valued\_1\ X1\ X2)\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3\_membered\ X1)\wedge(((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge(v1\_xreal\_0\ X3)))\Rightarrow((v1\_funct\_1\ (k26\_valued\_1\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k26\_valued\_1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow(\forall X1.(v1\_xcmplx\_0\ X1)\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow((X2 = k24\_valued\_1\ X0\ X1)\Leftrightarrow((k9\_xtuple\_0\ X2 = k9\_xtuple\_0\ X0)\wedge(\forall X3.(X3 \in k9\_xtuple\_0\ X2)\Rightarrow(k1\_funct\_1\ X2\ X3 = k3\_xcmplx\_0\ X1\ (k1\_funct\_1\ X0\ X3))))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow((v1\_partfun1\ X1\ X0)\Leftrightarrow(k1\_relset\_1\ X0\ X1 = X0)) \tag{8}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(v1\_membered\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(v3\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v3\_valued\_0\ X2)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_valued\_0\ X2)) \tag{14}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))\Rightarrow((v1\_partfun1\ X2\ X0)\Leftrightarrow(v1\_partfun1\ (k26\_valued\_1\ X0\ k1\_numbers\ X2\ X1)\ X0))))$$