t92_rfunct_1 (TMSMxGm-MEmZZi6gjemZHZz71DcF6A31q6Cq)

October 27, 2020

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 $v3\_funct\_1 : \iota \Rightarrow o$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_comseq\_2 : \iota \Rightarrow o$ be given. Let $k26\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k56\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_membered : \iota \Rightarrow o$ be given. Let $k54\_valued\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $k30\_valued\_1 : \iota \Rightarrow \iota$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $v2\_seq\_2 : \iota \Rightarrow o$ be given. Let $v1\_valued\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers)))) \Rightarrow ((v3\_funct\_1\ (k2\_partfun1\ X1\ k1\_numbers\ X2\ X0)) \Rightarrow (v3\_funct\_1\ (k2\_partfun1\ X1\ k1\_numbers\ (k56\_valued\_1\ X1\ k1\_numbers\ X2)\ X0)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers)))) \Rightarrow ((v3\_funct\_1\ (k2\_partfun1\ X1\ k1\_numbers\ X2\ X0)) \Rightarrow (v3\_funct\_1\ (k2\_partfun1\ X1\ k1\_numbers\ (k32\_valued\_1\ X1\ k1\_numbers\ X2)\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (\forall X2.(v1\_xreal\_0\ X2) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers)))) \Rightarrow ((v3\_funct\_1\ (k2\_partfun1\ X1\ k1\_numbers\ X3\ X0)) \Rightarrow (v3\_funct\_1\ (k2\_partfun1\ X1\ k1\_numbers\ (k26\_valued\_1\ X1\ k1\_numbers\ X3\ X2)\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_membered\ X1)\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow(k56\_valued\_1\ X0\ X1\ X2 = k54\_valued\_1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3\_membered\ X1)\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow(k32\_valued\_1\ X0\ X1\ X2 = k30\_valued\_1\ X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow(k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v3\_valued\_0\ X0)\wedge(v2\_seq\_2\ X0))))\Rightarrow((v1\_relat\_1\ (k5\_relat\_1\ X0\ X1))\wedge((v1\_funct\_1\ (k5\_relat\_1\ X0\ X1))\wedge((v3\_valued\_0\ (k5\_relat\_1\ X0\ X1))\wedge(v2\_seq\_2\ (k5\_relat\_1\ X0\ X1))))) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\Rightarrow((v1\_relat\_1\ (k30\_valued\_1\ X0))\wedge((v1\_funct\_1\ (k30\_valued\_1\ X0))\wedge((v1\_valued\_0\ (k30\_valued\_1\ X0))\wedge(v3\_valued\_0\ (k30\_valued\_1\ X0))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0))\Rightarrow((v1\_relat\_1\ (k5\_relat\_1\ X0\ X1))\wedge(v3\_valued\_0\ (k5\_relat\_1\ X0\ X1))) \tag{9}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\Rightarrow((v1\_relat\_1\ (k54\_valued\_1\ X0))\wedge((v1\_funct\_1\ (k54\_valued\_1\ X0))\wedge((v3\_valued\_0\ (k54\_valued\_1\ X0))\wedge(v2\_seq\_2\ (k54\_valued\_1\ X0))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X0)\Rightarrow(v1\_relat\_1\ (k5\_relat\_1\ X0\ X1)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_membered\ X1)\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow((v1\_funct\_1\ (k56\_valued\_1\ X0\ X1\ X2))\wedge(m1\_subset\_1\ (k56\_valued\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3\_membered\ X1)\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow((v1\_funct\_1\ (k32\_valued\_1\ X0\ X1\ X2))\wedge(m1\_subset\_1\ (k32\_valued\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow((v1\_funct\_1\ (k2\_partfun1\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k2\_partfun1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3\_membered\ X1)\wedge(((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge(v1\_xreal\_0\ X3)))\Rightarrow((v1\_funct\_1\ (k26\_valued\_1\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k26\_valued\_1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{16}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(v1\_membered\ X0) \tag{17}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v3\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0))))\Rightarrow((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v3\_valued\_0\ X0)\wedge(v1\_comseq\_2\ X0)))) \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.(v3\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v3\_valued\_0\ X2)) \tag{20}$$

Theorem 1

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers))))\Rightarrow((v3\_funct\_1\ (k2\_partfun1\ X1\ k1\_numbers\ X2\ X0))\Rightarrow((\forall X3.(v1\_xreal\_0\ X3)\Rightarrow(v1\_comseq\_2\ (k2\_partfun1\ X1\ k1\_numbers\ (k26\_valued\_1\ X1\ k1\_numbers\ X2\ X3)\ X0)))\wedge((v1\_comseq\_2\ (k2\_partfun1\ X1\ k1\_numbers\ (k32\_valued\_1\ X1\ k1\_numbers\ X2)\ X0))\wedge(v1\_comseq\_2\ (k2\_partfun1\ X1\ k1\_numbers\ (k56\_valued\_1\ X1\ k1\_numbers\ X2)\ X0))))))$$