t28_bvfunc26 (TMcan6KQj4sQo4wjiXtERv9Vw7R1DjLnGD1)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_margrel1 : \iota$ be given. Let $k6\_bvfunc26 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_bvfunc\_1 : \iota \Rightarrow \iota$ be given. Let $k12\_bvfunc\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_bvfunc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow ((r2\_funct\_2\ X0\ k6\_margrel1\ (k1\_bvfunc\_1\ X0\ (k12\_bvfunc\_1\ X0))\ (k11\_bvfunc\_1\ X0)) \wedge (r2\_funct\_2\ X0\ k6\_margrel1\ (k1\_bvfunc\_1\ X0\ (k11\_bvfunc\_1\ X0))\ (k12\_bvfunc\_1\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ X0\ k6\_margrel1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k6\_margrel1)))))) \Rightarrow (r2\_funct\_2\ X0\ k6\_margrel1\ (k6\_bvfunc26\ X0\ (k11\_bvfunc\_1\ X0)\ X1)\ (k1\_bvfunc\_1\ X0\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ X0\ k6\_margrel1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k6\_margrel1)))))) \Rightarrow (r2\_funct\_2\ X0\ k6\_margrel1\ (k6\_bvfunc26\ X0\ (k12\_bvfunc\_1\ X0)\ X1)\ (k11\_bvfunc\_1\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X1) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \wedge ((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ X0\ X1) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))) \Rightarrow ((r2\_funct\_2\ X0\ X1\ X2\ X3) \Leftrightarrow (X2 = X3)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0\ X0)\wedge((v1_funct_1\ X1)\wedge(
(v1_funct_2\ X1\ X0\ k6_margrel1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (
k2_zfmisc_1\ X0\ k6_margrel1))))))\Rightarrow((v1_funct_1\ (k1_bvfunc_1\
X0\ X1))\wedge((v1_funct_2\ (k1_bvfunc_1\ X0\ X1)\ X0\ k6_margrel1)\wedge(m1_subset_1\
(k1_bvfunc_1\ X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k6_margrel1)))))) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow((v1_funct_1\ (k12_bvfunc_1\ X0))\wedge
((v1_funct_2\ (k12_bvfunc_1\ X0)\ X0\ k6_margrel1)\wedge(m1_subset_1 \tag{6}$$
$$(k12\_bvfunc\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k6\_margrel1)))))$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow((v1_funct_1\ (k11_bvfunc_1\ X0))\wedge
((v1_funct_2\ (k11_bvfunc_1\ X0)\ X0\ k6_margrel1)\wedge(m1_subset_1 \tag{7}$$
$$(k11\_bvfunc\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k6\_margrel1)))))$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge(((v1_funct_1\
X1)\wedge((v1_funct_2\ X1\ X0\ k6_margrel1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\
(k2_zfmisc_1\ X0\ k6_margrel1)))))\wedge((v1_funct_1\ X2)\wedge((v1_funct_2\
X2\ X0\ k6_margrel1)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\
X0\ k6_margrel1)))))))\Rightarrow(k6_bvfunc26\ X0\ X1\ X2 = k6_bvfunc26\ X0\ X2\
X1) \tag{8}$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow((r2_funct_2\ X0\ k6_margrel1\ (k6_bvfunc26\
X0\ (k11_bvfunc_1\ X0)\ (k11_bvfunc_1\ X0))\ (k12_bvfunc_1\ X0))\wedge((
r2_funct_2\ X0\ k6_margrel1\ (k6_bvfunc26\ X0\ (k11_bvfunc_1\ X0)\ (k12_bvfunc_1\
X0))\ (k11_bvfunc_1\ X0))\wedge(r2_funct_2\ X0\ k6_margrel1\ (k6_bvfunc26\
X0\ (k12_bvfunc_1\ X0)\ (k12_bvfunc_1\ X0))\ (k11_bvfunc_1\ X0))))$$