

t29_bvfunc_5 (TMTBrZsLAWARRU- jxh2yJJ7RcghM83qYfv5X)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k6_margrel1 : \iota$ 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 $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_bvfunc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_bvfunc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ (v1_funct_2 X1 X0 k6_margrel1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ k2_zfmisc_1 X0 k6_margrel1)))))) \Rightarrow ((r2_funct_2 X0 k6_margrel1 \\ (k9_bvfunc_1 X0 (k12_bvfunc_1 X0) X1) (k12_bvfunc_1 X0)) \Rightarrow (r2_funct_2 \\ X0 k6_margrel1 X1 (k12_bvfunc_1 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ (v1_funct_2 X1 X0 k6_margrel1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ k2_zfmisc_1 X0 k6_margrel1)))))) \Rightarrow ((r2_funct_2 X0 k6_margrel1 \\ (k9_bvfunc_1 X0 (k12_bvfunc_1 X0) (k9_bvfunc_1 X0 (k12_bvfunc_1 \\ X0) X1)) (k12_bvfunc_1 X0)) \Rightarrow (r2_funct_2 X0 k6_margrel1 X1 (k12_bvfunc_1 \\ X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\ ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ X3) \Leftrightarrow (X2 = X3)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((v1_funct_1 (k12_bvfunc_1 X0)) \wedge \\ ((v1_funct_2 (k12_bvfunc_1 X0) X0 k6_margrel1) \wedge (m1_subset_1 \\ (k12_bvfunc_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 k6_margrel1)))) \end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 X0 k6_margrel1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 k6_margrel1)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge \\ & (v1_funct_2 X2 X0 k6_margrel1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k6_margrel1)))))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge \\ & (v1_funct_2 X3 X0 k6_margrel1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k6_margrel1)))))) \Rightarrow (((r2_funct_2 X0 k6_margrel1 \\ & (k9_bvfunc_1 X0 X1 (k9_bvfunc_1 X0 X2 X3)) (k12_bvfunc_1 X0)) \wedge \\ & (r2_funct_2 X0 k6_margrel1 (k9_bvfunc_1 X0 X1 X2) (k12_bvfunc_1 \\ & X0)) \wedge (r2_funct_2 X0 k6_margrel1 X1 (k12_bvfunc_1 X0))) \Rightarrow (r2_funct_2 \\ & X0 k6_margrel1 X3 (k12_bvfunc_1 X0)))) \end{aligned}$$