t1_gfacirc1 (TMQVn2QH7shUYfJDdtSSnnM13TE466h2s9e)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_margrel1 : \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_gfacirc1 : \iota$ be given. Let $k10\_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_margrel1 : \iota \Rightarrow \iota$ be given. Let $k5\_twoscomp : \iota$ be given. Let $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $np\_\_0 : \iota$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xboolean : \iota \Rightarrow \iota$ be given. Let $k8\_margrel1 : \iota$ be given. Let $k2\_xboolean : \iota$ be given. Let $k7\_margrel1 : \iota$ be given. Let $k1\_xboolean : \iota$ be given. Let $k10\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboolean : \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ 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 $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ 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.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{2}$$

Assume the following.

$$\begin{array}{c}((v2\_xxreal\_0\ np\_\_1) \wedge (m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_1\ k1\_numbers))\end{array} \tag{3}$$

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{4}$$

Assume the following.

$$k6\_xcmplx\_0\ np\_\_1\ np\_\_0 = np\_\_1 \tag{5}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k6\_margrel1) \Rightarrow (k9\_margrel1\ X0 = k3\_xboolean\ X0) \tag{6}$$

Assume the following.

$$k8\_margrel1 = k2\_xboolean \tag{7}$$

Assume the following.

$$k7\_margrel1 = k1\_xboolean \tag{8}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{9}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k6\_margrel1) \wedge (m1\_subset\_1\ X1\ k6\_margrel1)) \Rightarrow (k10\_margrel1\ X0\ X1 = k4\_xboolean\ X0\ X1) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (k10\_binarith\ X0\ X1 = k5\_finseq\_1\ X1) \tag{12}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k3\_xboolean\ (k3\_xboolean\ X0) = X0) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xboolean\ X0) \wedge (v1\_xboolean\ X1)) \Rightarrow (k4\_xboolean\ X0\ X0 = X0) \tag{14}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1) \wedge (v3\_ordinal1\ k4\_ordinal1) \tag{15}$$

Assume the following.

$$\neg v1\_xboole\_0\ k6\_margrel1 \tag{16}$$

Assume the following.

$$m1\_subset\_1\ k8\_margrel1\ k6\_margrel1 \tag{17}$$

Assume the following.

$$m1\_subset\_1\ k7\_margrel1\ k6\_margrel1 \tag{18}$$

Assume the following.

$$(v1\_funct\_1\ k5\_twoscomp)\wedge((v1\_funct\_2\ k5\_twoscomp\ (k4\_finseq\_2\ np\_\_2\ k6\_margrel1)\ k6\_margrel1)\wedge(m1\_subset\_1\ k5\_twoscomp\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_finseq\_2\ np\_\_2\ k6\_margrel1)\ k6\_margrel1)))) \tag{19}$$

Assume the following.

$$(v1\_funct\_1\ k1\_gfacirc1)\wedge((v1\_funct\_2\ k1\_gfacirc1\ (k4\_finseq\_2\ np\_\_1\ k6\_margrel1)\ k6\_margrel1)\wedge(m1\_subset\_1\ k1\_gfacirc1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_finseq\_2\ np\_\_1\ k6\_margrel1)\ k6\_margrel1)))) \tag{20}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0)\Rightarrow(k3\_xboolean\ X0 = k6\_xcmplx\_0\ np\_\_1\ X0) \tag{21}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ (k4\_finseq\_2\ np\_\_2\ k6\_margrel1)\ k6\_margrel1)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_finseq\_2\ np\_\_2\ k6\_margrel1)\ k6\_margrel1)))))\Rightarrow((X0 = k5\_twoscomp)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ k6\_margrel1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k6\_margrel1)\Rightarrow(k1\_funct\_1\ X0\ (k10\_finseq\_1\ X1\ X2) = k9\_margrel1\ (k10\_margrel1\ X1\ X2))))) \tag{22}$$

Assume the following.

$$k2\_xboolean = np\_\_1 \tag{23}$$

Assume the following.

$$k1\_xboolean = k6\_numbers \tag{24}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ (k4\_finseq\_2\ np\_\_1\ k6\_margrel1)\ k6\_margrel1)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_finseq\_2\ np\_\_1\ k6\_margrel1)\ k6\_margrel1)))))\Rightarrow((X0 = k1\_gfacirc1)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ k6\_margrel1)\Rightarrow(k1\_funct\_1\ X0\ (k10\_binarith\ k6\_margrel1\ X1) = k9\_margrel1\ X1))) \tag{25}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k6\_margrel1)\Rightarrow(v1\_xboolean\ X0) \tag{26}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k6\_margrel1) \Rightarrow ((k1\_funct\_1\ k1\_gfacirc1\ (k10\_binarith\ k6\_margrel1\ X0) = k9\_margrel1\ X0) \wedge ((k1\_funct\_1\ k1\_gfacirc1\ (k10\_binarith\ k6\_margrel1\ X0) = k1\_funct\_1\ k5\_twoscomp\ (k10\_finseq\_1\ X0\ X0)) \wedge ((k1\_funct\_1\ k1\_gfacirc1\ (k10\_binarith\ k5\_numbers\ k6\_numbers) = np\_\_1) \wedge (k1\_funct\_1\ k1\_gfacirc1\ (k10\_binarith\ k5\_numbers\ np\_\_1) = k6\_numbers))))$$