t22_gobrd14 (TMSm2gfzrnPNUgExqcpMF1zXTXoraDwrrjE)

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Let $v3\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k15\_euclid : \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $v1\_topreal1 : \iota \Rightarrow o$ be given. Let $v2\_topreal1 : \iota \Rightarrow o$ be given. Let $v1\_goboard5 : \iota \Rightarrow o$ be given. Let $v2\_goboard5 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_goboard9 : \iota \Rightarrow \iota$ be given. Let $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_goboard9 : \iota \Rightarrow \iota$ be given. Let $k1\_goboard9 : \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_5 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ 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 $k5\_numbers : \iota$ be given. Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v3\_funct\_1\ X0) \wedge ((v1\_finseq\_6\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \wedge ((v1\_topreal1\ X0) \wedge ((v2\_topreal1\ X0) \wedge ((v1\_goboard5\ X0) \wedge ((v2\_goboard5\ X0) \wedge (m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))))))))) \Rightarrow (k3\_goboard9\ (k1\_goboard9\ X0) = k2\_goboard9\ X0) \tag{1}$$

Assume the following.

$$\forall X0.(m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow (k3\_topreal1\ np\_\_2\ X0 = k3\_topreal1\ np\_\_2\ (k4\_finseq\_5\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v3\_funct\_1\ X0) \wedge ((\neg v1\_xboole\_0\ X0) \wedge ((v1\_finseq\_6\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \wedge ((v1\_topreal1\ X0) \wedge ((v2\_topreal1\ X0) \wedge ((v1\_goboard5\ X0) \wedge ((v2\_goboard5\ X0) \wedge (m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))))))))) \Rightarrow (k2\_pre\_topc\ (k15\_euclid\ np\_\_2)\ (k3\_goboard9\ X0) = k4\_subset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ (k3\_goboard9\ X0)\ (k3\_topreal1\ np\_\_2\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow(k4\_finseq\_5\ X0\ X1 = k3\_finseq\_5\ X1) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v1\_finseq\_6\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\wedge((v1\_topreal1\ X0)\wedge((v2\_topreal1\ X0)\wedge((v1\_goboard5\ X0)\wedge((v2\_goboard5\ X0)\wedge(m1\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))))))\Rightarrow(k1\_goboard9\ X0 = k3\_finseq\_5\ X0) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((\neg v3\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0))))\Rightarrow((v1\_relat\_1\ (k3\_finseq\_5\ X0))\wedge((v1\_funct\_1\ (k3\_finseq\_5\ X0))\wedge((\neg v3\_funct\_1\ (k3\_finseq\_5\ X0))\wedge(v1\_finseq\_1\ (k3\_finseq\_5\ X0))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v1\_finseq\_6\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\wedge((v1\_topreal1\ X0)\wedge((v2\_topreal1\ X0)\wedge((v1\_goboard5\ X0)\wedge((v2\_goboard5\ X0)\wedge(m1\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))))))\Rightarrow((\neg v1\_xboole\_0\ (k1\_goboard9\ X0))\wedge((v1\_finseq\_6\ (k1\_goboard9\ X0)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\wedge((v1\_topreal1\ (k1\_goboard9\ X0))\wedge((v2\_topreal1\ (k1\_goboard9\ X0))\wedge((v1\_goboard5\ (k1\_goboard9\ X0))\wedge((v2\_goboard5\ (k1\_goboard9\ X0))\wedge(m2\_finseq\_1\ (k1\_goboard9\ X0)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))))))) \tag{10}$$

Theorem 1

$$\forall X0.((\neg v3\_funct\_1\ X0)\wedge((\neg v1\_xboole\_0\ X0)\wedge((v1\_finseq\_6\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\wedge((v1\_topreal1\ X0)\wedge((v2\_topreal1\ X0)\wedge((v1\_goboard5\ X0)\wedge((v2\_goboard5\ X0)\wedge(m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))))))))\Rightarrow(k2\_pre\_topc\ (k15\_euclid\ np\_\_2)\ (k2\_goboard9\ X0) = k4\_subset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ (k2\_goboard9\ X0)\ (k3\_topreal1\ np\_\_2\ X0))$$