t57_uproots (TMaMsDPdNBjefvoUh2zcKCQEmvNKtS29ngm)

October 27, 2020

Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v6\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v1\_vectsp\_2 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ 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 $k5\_numbers : \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_algseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_uproots : \iota \Rightarrow \iota \Rightarrow o$ 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. Let $k1\_algseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k4\_uproots : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_uproots : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k6\_polynom5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_valued\_0 : \iota \Rightarrow o$ be given. Let $v2\_pre\_poly : \iota \Rightarrow o$ be given. Let $k1\_polynom2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16\_pre\_poly : \iota \Rightarrow \iota$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $k3\_uproots : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_pre\_poly : \iota \Rightarrow \iota$ be given. Let $k1\_recdef\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_uproots : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v6\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_group\_1\ X0) \wedge ((v5\_group\_1\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge ((v5\_vectsp\_1\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l6\_algstr\_0\ X0))))))))))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0)) \wedge ((v1\_algseq\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))) \Rightarrow ((k1\_algseq\_1\ X0\ X1 = np\_\_1) \Rightarrow (k6\_polynom5\ X0\ X1 = k1\_xboole\_0))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ X0) \wedge ((v1\_funct\_1\ X1) \wedge ((v1\_partfun1\ X1\ X0) \wedge ((v4\_valued\_0\ X1) \wedge (v2\_pre\_poly\ X1)))))) \Rightarrow ((k1\_polynom2\ X0\ X1 = k1\_xboole\_0) \Rightarrow (X1 = k16\_pre\_poly\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge((v3\_valued\_0\ X1)\wedge(v2\_pre\_poly\ X1))))))\Rightarrow((X1 = k16\_pre\_poly\ X0)\Rightarrow(k3\_uproots\ X0\ X1 = k6\_numbers)) \tag{3}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge((v4\_valued\_0\ X1)\wedge(v2\_pre\_poly\ X1))))))\Rightarrow(k4\_uproots\ X0\ X1 = k3\_uproots\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge((v4\_valued\_0\ X1)\wedge(v2\_pre\_poly\ X1))))))\Rightarrow(k1\_polynom2\ X0\ X1 = k13\_pre\_poly\ X1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v1\_vectsp\_2\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\wedge((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge((v1\_algseq\_1\ X1\ X0)\wedge((v1\_uproots\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))))))\Rightarrow((v1\_relat\_1\ (k8\_uproots\ X0\ X1))\wedge((v4\_relat\_1\ (k8\_uproots\ X0\ X1)\ (u1\_struct\_0\ X0))\wedge((v1\_funct\_1\ (k8\_uproots\ X0\ X1))\wedge((v1\_partfun1\ (k8\_uproots\ X0\ X1)\ (u1\_struct\_0\ X0))\wedge((v4\_valued\_0\ (k8\_uproots\ X0\ X1))\wedge(v2\_pre\_poly\ (k8\_uproots\ X0\ X1))))))) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v1\_vectsp\_2\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge((v1\_algseq\_1\ X1\ X0)\wedge((v1\_uproots\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ (u1\_struct\_0\ X0))\wedge((v1\_funct\_1\ X2)\wedge((v1\_partfun1\ X2\ (u1\_struct\_0\ X0))\wedge((v4\_valued\_0\ X2)\wedge(v2\_pre\_poly\ X2))))))\Rightarrow((X2 = k8\_uproots\ X0\ X1)\Leftrightarrow((k13\_pre\_poly\ X2 = k6\_polynom5\ X0\ X1)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k1\_recdef\_1\ X2\ X3 = k7\_uproots\ X0\ X3\ X1)))))) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v4\_valued\_0\ X0))\Rightarrow((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0)) \tag{9}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v1\_vectsp\_2\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge((v1\_algseq\_1\ X1\ X0)\wedge((v1\_uproots\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))))\Rightarrow((k1\_algseq\_1\ X0\ X1 = np\_\_1)\Rightarrow(k4\_uproots\ (u1\_struct\_0\ X0)\ (k8\_uproots\ X0\ X1) = k6\_numbers)))$$