t14_hilbasis (TML-gFLm7taTTgS5RgqP2xTT6bu31HR1XSks)

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Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v1\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15\_pre\_poly : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_hilbasis : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_group\_1 : \iota \Rightarrow o$ be given. Let $k3\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_hilbasis : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_group\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ 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 $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14\_pre\_poly : \iota \Rightarrow \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l4\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v6\_struct\_0 : \iota \Rightarrow o$ be given. Let $l4\_struct\_0 : \iota \Rightarrow o$ be given. Let $v9\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v4\_funct\_1 : \iota \Rightarrow o$ be given. Let $v3\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v6\_vectsp\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((\neg v7\_struct\_0\ X1) \wedge ((v1\_group\_1\ X1) \wedge (l6\_algstr\_0\ X1))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ X0) \Rightarrow ((k3\_polynom1\ X0\ X1\ (k3\_hilbasis\ X0\ X2\ X1)\ (k2\_hilbasis\ X0\ X2) = k1\_group\_1\ X1) \wedge (\forall X3.((v1\_relat\_1\ X3) \wedge ((v4\_relat\_1\ X3\ X0) \wedge ((v1\_funct\_1\ X3) \wedge ((v1\_partfun1\ X3\ X0) \wedge ((v4\_valued\_0\ X3) \wedge (v2\_pre\_poly\ X3))))))) \Rightarrow ((X3 \neq k2\_hilbasis\ X0\ X2) \Rightarrow (k3\_polynom1\ X0\ X1\ (k3\_hilbasis\ X0\ X2\ X1)\ X3 = k4\_struct\_0\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ X0) \Rightarrow ((k2\_hilbasis\ X0\ X1 = k2\_hilbasis\ X0\ X2) \Rightarrow (X1 = X2)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X0\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((r2\_funct\_2\ X0\ X1\ X2\ X3)\Leftrightarrow(X2 = X3)) \tag{3}$$

Assume the following.

$$\forall X0.k15\_pre\_poly\ X0 = k14\_pre\_poly\ X0 \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge(l4\_algstr\_0\ X0)))\Rightarrow(k1\_group\_1\ X0 = k5\_struct\_0\ X0) \tag{5}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k14\_pre\_poly\ X0) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v6\_struct\_0\ X0)\wedge(l4\_struct\_0\ X0))\Rightarrow(\neg v9\_struct\_0\ (k5\_struct\_0\ X0)\ X0) \tag{7}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(v9\_struct\_0\ (k4\_struct\_0\ X0)\ X0) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Rightarrow(m1\_subset\_1\ X2\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow((l2\_algstr\_0\ X0)\wedge(l5\_algstr\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0)\Rightarrow((l4\_algstr\_0\ X0)\wedge(l4\_struct\_0\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{12}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l1\_algstr\_0\ X0)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ X0)\wedge((\neg v2\_struct\_0\ X2)\wedge((v1\_group\_1\ X2)\wedge(l5\_algstr\_0\ X2))))\Rightarrow((v1\_funct\_1\ (k3\_hilbasis\ X0\ X1\ X2))\wedge((v1\_funct\_2\ (k3\_hilbasis\ X0\ X1\ X2)\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X2))\wedge(m1\_subset\_1\ (k3\_hilbasis\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X2))))))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(m2\_subset\_1\ (k2\_hilbasis\ X0\ X1)\ (k14\_pre\_poly\ X0)\ (k15\_pre\_poly\ X0)) \tag{15}$$

Assume the following.

$$\forall X0.m1\_subset\_1\ (k15\_pre\_poly\ X0)\ (k1\_zfmisc\_1\ (k14\_pre\_poly\ X0)) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k15\_pre\_poly\ X0)))\Rightarrow(v4\_funct\_1\ X1) \tag{17}$$

Assume the following.

$$\forall X0.(v4\_funct\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))) \tag{18}$$

Assume the following.

$$\forall X0.(l4\_algstr\_0\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge(v4\_vectsp\_1\ X0))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge(v1\_group\_1\ X0))) \tag{19}$$

Assume the following.

$$\forall X0.(l4\_algstr\_0\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge(v4\_vectsp\_1\ X0))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v3\_vectsp\_1\ X0)\wedge(v6\_vectsp\_1\ X0)))) \tag{20}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow((v2\_struct\_0\ X0)\Rightarrow(v7\_struct\_0\ X0)) \tag{21}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge((v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v1\_vectsp\_1\ X0)\wedge((v3\_vectsp\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge(v4\_rlvect\_1\ X0))))))))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v7\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v1\_vectsp\_1\ X0)\wedge((v3\_vectsp\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge(v4\_rlvect\_1\ X0))))))) \tag{22}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k15\_pre\_poly\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X1)\Rightarrow((v1\_partfun1\ X2\ X0)\wedge((v4\_valued\_0\ X2)\wedge(v2\_pre\_poly\ X2)))) \tag{23}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k15\_pre\_poly\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X1)\Rightarrow(v4\_relat\_1\ X2\ X0)) \tag{24}$$

Theorem 1

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v1\_vectsp\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))))\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X1)\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ X1)\Rightarrow((r2\_funct\_2\ (k15\_pre\_poly\ X1)\ (u1\_struct\_0\ X0)\ (k3\_hilbasis\ X1\ X2\ X0)\ (k3\_hilbasis\ X1\ X3\ X0))\Rightarrow(X2 = X3)))))$$