

t23\_hilbasis (TM-  
LYKjHju4nEvamtWytNM9oLEGtPzP6m97E)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  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  $l6\_algstr\_0 : \iota \Rightarrow o$  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  $u1\_struct\_0 : \iota \Rightarrow \iota$  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  $v1\_quofield : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v13\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v6\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. (& \neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v3\_rlvect\_1 \\ & X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l2\_algstr\_0 X0)))) \Rightarrow (\forall X1. ((\neg \\ & v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 \\ & X1) \wedge (l2\_algstr\_0 X1)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ & X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge ((v13\_vectsp\_1 X2 X0 X1) \wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X1)))))) \Rightarrow (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2 (k4\_struct\_0 \\ & X0) = k4\_struct\_0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \wedge \\ ((\neg v2\_struct\_0 X1) \wedge (l6\_algstr\_0 X1))) \Rightarrow (\forall X2. (m1\_subset\_1 \\ X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))) \Rightarrow \\ (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 \\ X1)) \wedge (v1\_quofield X2 X0 X1))) \Rightarrow ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge ((v6\_group\_1 X2 X0 X1) \wedge \\ (v1\_group\_6 X2 X0 X1) \wedge (v13\_vectsp\_1 X2 X0 X1)))))) \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v3\_rlvect\_1 \\ & \quad X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0)))))) \Rightarrow (\forall X1.((\neg \\ & v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 \\ & \quad X1) \wedge (l6\_algstr\_0 X1)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ & X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & \quad (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow ((v1\_quofield \\ & X2 X0 X1) \Rightarrow (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2 (k4\_struct\_0 \\ & \quad X0) = k4\_struct\_0 X1)))) \end{aligned}$$