

# t1\_hilbasis

(TMQkRy3ZzkBU4YkQndxtwJ1fG3ZdqEq65Z2)

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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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.(( \\ & \quad v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \Rightarrow (\forall X2. \\ & \quad ((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 X2) \wedge (v1\_finseq\_1 X2))) \Rightarrow (\forall X3. \\ & \quad ((v1\_relat\_1 X3) \wedge ((v1\_funct\_1 X3) \wedge (v1\_finseq\_1 X3))) \Rightarrow (\forall X4. \\ & \quad ((v1\_relat\_1 X4) \wedge ((v1\_funct\_1 X4) \wedge (v1\_finseq\_1 X4))) \Rightarrow (((r1\_tarski \\ & \quad (k10\_xtuple\_0 X1) (k9\_xtuple\_0 X0)) \wedge ((r1\_tarski (k10\_xtuple\_0 \\ & \quad X2) (k9\_xtuple\_0 X0)) \wedge ((X3 = k3\_relat\_1 X1 X0) \wedge (X4 = k3\_relat\_1 \\ & \quad X2 X0)))) \Rightarrow (k3\_relat\_1 (k7\_finseq\_1 X1 X2) X0 = k7\_finseq\_1 X3 X4)))))) \\ & \hspace{15em} (1) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & \quad (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & \quad X1))) \Rightarrow (k10\_xtuple\_0 (k7\_finseq\_1 X0 X1) = k2\_xboole\_0 (k10\_xtuple\_0 \\ & \quad X0) (k10\_xtuple\_0 X1))) \\ & \hspace{15em} (2) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & \quad (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & \quad X1))) \Rightarrow (r1\_tarski (k10\_xtuple\_0 X0) (k10\_xtuple\_0 (k7\_finseq\_1 \\ & \quad X1 X0)))) \\ & \hspace{15em} (3) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & \quad (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & \quad X1))) \Rightarrow (r1\_tarski (k10\_xtuple\_0 X0) (k10\_xtuple\_0 (k7\_finseq\_1 \\ & \quad X0 X1)))) \\ & \hspace{15em} (4) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.(( \\ v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \Rightarrow ((r1\_tarSKI \\ (k10\_xtuple\_0 X1) (k9\_xtuple\_0 X0)) \Rightarrow ((v1\_relat\_1 (k3\_relat\_1 \\ X1 X0)) \wedge ((v1\_funct\_1 (k3\_relat\_1 X1 X0)) \wedge (v1\_finseq\_1 (k3\_relat\_1 \\ X1 X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \wedge (( \\ v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1))) \Rightarrow ((v1\_relat\_1 (k3\_relat\_1 X0 \\ X1)) \wedge (v1\_funct\_1 (k3\_relat\_1 X0 X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. v1\_relat\_1 (k3\_relat\_1 X0 X1) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (r1\_tarSKI X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow \\ (X2 \in X1)) \end{aligned} \quad (8)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ ((\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ X1))) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (\neg(r1\_tarSKI \\ (k2\_xboole\_0 (k10\_xtuple\_0 X0) (k10\_xtuple\_0 X1)) (k9\_xtuple\_0 \\ X2)) \wedge (\forall X3.((v1\_relat\_1 X3) \wedge ((v1\_funct\_1 X3) \wedge (v1\_finseq\_1 \\ X3))) \Rightarrow (\forall X4.((v1\_relat\_1 X4) \wedge ((v1\_funct\_1 X4) \wedge (v1\_finseq\_1 \\ X4))) \Rightarrow (\neg(X3 = k3\_relat\_1 X0 X2) \wedge ((X4 = k3\_relat\_1 X1 X2) \wedge (k3\_relat\_1 \\ (k7\_finseq\_1 X0 X1) X2 = k7\_finseq\_1 X3 X4)))))))))) \end{aligned}$$