

# l14\_dtconstr (TMdd- cpq1nLf98YAJy6A6Kb7vLvMJPnXPgQN)

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Let  $r1\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_dtconstr : \iota$  be given. Let  $c3\_dtconstr : \iota$  be given. Let  $k3\_pre\_poly : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $c2\_dtconstr : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k5\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_lang1 : \iota \Rightarrow o$  be given. Let  $l1\_lang1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$m1\_subset\_1 \ k1\_xboole\_0 \ k4\_ordinal1 \tag{1}$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 \ X0) \wedge ((m1\_subset\_1 \\ & X1 \ X0) \wedge (m1\_subset\_1 \ X2 \ X0))) \Rightarrow (k7\_domain\_1 \ X0 \ X1 \ X2 = k2\_tarski \ X1 \\ & X2) \end{aligned} \tag{3}$$

Assume the following.

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

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(m1\_subset\_1 X1 X0))\Rightarrow (k3\_pre\_poly X0 X1 = k5\_finseq\_1 X1) \quad (6)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\neg v1\_xboole\_0 (k2\_tarski X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0)\Rightarrow(\forall X2.(m2\_finseq\_2 X2 X0 X1)\Rightarrow(m2\_finseq\_1 X2 X0)) \quad (9)$$

Assume the following.

$$(\neg v2\_struct\_0 k5\_dtconstr)\wedge((v1\_lang1 k5\_dtconstr)\wedge(l1\_lang1 k5\_dtconstr)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(m1\_subset\_1 X1 X0))\Rightarrow (m2\_finseq\_2 (k3\_pre\_poly X0 X1) X0 (k3\_finseq\_2 X0)) \quad (11)$$

Assume the following.

$$\forall X0.m1\_finseq\_2 (k3\_finseq\_2 X0) X0 \quad (12)$$

Assume the following.

$$m1\_subset\_1 c3\_dtconstr (u1\_struct\_0 k5\_dtconstr) \quad (13)$$

Assume the following.

$$m1\_subset\_1 c2\_dtconstr (u1\_struct\_0 k5\_dtconstr) \quad (14)$$

Assume the following.

$$c3\_dtconstr = np\_1 \quad (15)$$

Assume the following.

$$c2\_dtconstr = k6\_numbers \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski X0 X1 = k2\_tarski (k2\_tarski X0 X1) (k1\_tarski X0) \quad (17)$$

Assume the following.

$$\forall X0. k5\_finseq\_1 X0 = k1\_tarski (k4\_tarski np\_1 X0) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v1\_lang1 X0) \wedge (l1\_lang1 X0))) \Rightarrow \\ & ((X0 = k5\_dtconstr) \Leftrightarrow ((u1\_struct\_0 X0 = k7\_domain\_1 k5\_numbers \\ & k6\_numbers np\_1) \wedge (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\ & (\forall X2. (m2\_finseq\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lang1 X0 X1 \\ & X2) \Leftrightarrow ((X1 = np\_1) \wedge ((X2 = k3\_pre\_poly k5\_numbers k6\_numbers) \vee \\ & X2 = k3\_pre\_poly k5\_numbers np\_1)))))))))) \end{aligned} \quad (19)$$

**Theorem 1**

$$r1\_lang1 k5\_dtconstr c3\_dtconstr (k3\_pre\_poly (u1\_struct\_0 k5\_dtconstr) c2\_dtconstr)$$