

l18_dtconstr (TMWWNSBTVZXbMouNSVC- Qrk5Uu8ZW4AyA4Ra)

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Let $k1_lang1 : \iota \Rightarrow \iota$ be given. Let $k5_dtconstr : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. 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 $r1_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_lang1 : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_lang1 : \iota \Rightarrow \iota$ 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 $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ 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 $k3_pre_poly : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $c3_dtconstr : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_lang1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(\neg(\neg r1_xboole_0 X0 X1) \wedge (\forall X2.\neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2.(X2 \in X0) \wedge (X2 \in X1)) \wedge (r1_xboole_0 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (3)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_lang1 X0)) \Rightarrow (k2_xboole_0 (k1_lang1 X0) (k2_lang1 X0) = u1_struct_0 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \text{ np_1}) \wedge (m2_subset_1 \text{ np_1 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_1 } k5_numbers) \wedge (m1_subset_1 \text{ np_1 } k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. k9_finseq_1 X0 = k5_finseq_1 X0 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 \\ & X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k7_domain_1 X0 X1 X2 = k2_tarski X1 \\ & X2) \end{aligned} \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow \\ & (k3_pre_poly X0 X1 = k5_finseq_1 X1) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & r1_lang1 \text{ k5_dtconstr } c3_dtconstr \text{ (k3_pre_poly (u1_struct_0} \\ & \text{ k5_dtconstr) } c3_dtconstr) \end{aligned} \quad (12)$$

Assume the following.

$$u1_struct_0 \text{ k5_dtconstr} = k7_domain_1 \text{ k5_numbers } k6_numbers \text{ np_1} \quad (13)$$

Assume the following.

$$\forall X0. v1_finseq_1 (k5_finseq_1 X0) \quad (14)$$

Assume the following.

$$(\neg v1_xboole_0 \text{ k4_ordinal1}) \wedge (v3_ordinal1 \text{ k4_ordinal1}) \quad (15)$$

Assume the following.

$$\forall X0. (v1_relat_1 (k5_finseq_1 X0)) \wedge (v1_funct_1 (k5_finseq_1 X0)) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. \neg v1_xboole_0 (k2_tarski X0 X1) \quad (17)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (18)$$

Assume the following.

$$\forall X0. (l1_lang1 X0) \Rightarrow (l1_struct_0 X0) \quad (19)$$

Assume the following.

$$(\neg v2_struct_0 k5_dtconstr) \wedge ((v1_lang1 k5_dtconstr) \wedge (l1_lang1 k5_dtconstr)) \quad (20)$$

Assume the following.

$$m1_subset_1 c3_dtconstr (u1_struct_0 k5_dtconstr) \quad (21)$$

Assume the following.

$$c3_dtconstr = np_1 \quad (22)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_lang1 X0)) \Rightarrow (k2_lang1 X0 = \text{ReplSep} \\ (\text{toset } (\lambda X1 : \iota. m1_subset_1 X1 (u1_struct_0 X0))) (\lambda X1 : \\ \iota. \exists X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 \\ X2)))) \wedge (r1_lang1 X0 X1 X2)) (\lambda X1 : \iota. X1)) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_tarski X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (25)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_lang1 X0)) \Rightarrow (k1_lang1 X0 = \text{ReplSep} \\ (\text{toset } (\lambda X1 : \iota. m1_subset_1 X1 (u1_struct_0 X0))) (\lambda X1 : \\ \iota. \forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 \\ X2)))) \Rightarrow (\neg r1_lang1 X0 X1 X2)) (\lambda X1 : \iota. X1)) \end{aligned} \quad (26)$$

Theorem 1

$$\begin{aligned} k1_lang1 k5_dtconstr = \text{ReplSep} (\text{toset } (\lambda X0 : \iota. m1_subset_1 \\ X0 (u1_struct_0 k5_dtconstr))) (\lambda X0 : \iota. \forall X1. ((v1_relat_1 \\ X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (\neg r1_lang1 k5_dtconstr \\ X0 X1)) (\lambda X0 : \iota. X0) \end{aligned}$$