

t7_scm_comp (TM- bKETm85Fu9KSntxc7hHbbWSe4wnxxnPZ)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_scm_comp : \iota$ be given. Let $k6_dtconstr : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k15_scm_comp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_scm_comp : \iota \Rightarrow \iota$ be given. Let $k5_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k2_ami_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_ami_3 : \iota \Rightarrow \iota$ be given. Let $k4_scm_comp : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k3_afinsq_1 : \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_dtconstr : \iota \Rightarrow o$ be given. Let $l1_lang1 : \iota \Rightarrow o$ be given. Let $m1_dtconstr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_trees_3 : \iota \Rightarrow \iota$ be given. Let $k4_dtconstr : \iota \Rightarrow \iota$ be given. Let $v1_lang1 : \iota \Rightarrow o$ be given. Let $v2_dtconstr : \iota \Rightarrow o$ be given. Let $v3_dtconstr : \iota \Rightarrow o$ be given. Let $v3_bintree1 : \iota \Rightarrow o$ be given. Let $k14_scm_comp : \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_ami_3 : \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k7_dtconstr : \iota \Rightarrow \iota$ be given. Let $k1_bintree1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_pre_poly : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_scm_comp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_afinsq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k13_scm_comp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. k5_afinsq_1 X0 = k3_afinsq_1 X0 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_dtconstr X0) \wedge (l1_lang1 X0))) \Rightarrow \\ & ((\neg v1_xboole_0 (k6_dtconstr X0)) \wedge (m1_subset_1 (k6_dtconstr \\ & X0) (k1_zfmisc_1 (u1_struct_0 X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (k6_dtconstr k1_scm_comp)) \Rightarrow (m1_dtconstr \\ & (k3_scm_comp X0) (u1_struct_0 k1_scm_comp) (k5_trees_3 (u1_struct_0 \\ & k1_scm_comp)) (k4_dtconstr k1_scm_comp)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & (\neg v2_struct_0 k1_scm_comp) \wedge ((v1_lang1 k1_scm_comp) \wedge ((v1_dtconstr \\ & k1_scm_comp) \wedge (v2_dtconstr k1_scm_comp) \wedge (v3_dtconstr k1_scm_comp) \wedge \\ & ((v3_bintree1 k1_scm_comp) \wedge (l1_lang1 k1_scm_comp)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k14_scm_comp) \wedge ((v1_funct_2 k14_scm_comp (k4_dtconstr \\ & k1_scm_comp) (k9_funct_2 k5_numbers (k8_afinsq_1 (u1_compos_1 \\ & k1_ami_3)))) \wedge (m1_subset_1 k14_scm_comp (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k4_dtconstr k1_scm_comp) (k9_funct_2 k5_numbers (k8_afinsq_1 \\ & (u1_compos_1 k1_ami_3)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. k3_afinsq_1 X0 = k16_funcop_1 k6_numbers X0 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_dtconstr X0 (u1_struct_0 k1_scm_comp) (k5_trees_3 \\ & (u1_struct_0 k1_scm_comp)) (k4_dtconstr k1_scm_comp)) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (k15_scm_comp X0 X1 = k1_funct_1 \\ & (k3_funct_2 (k4_dtconstr k1_scm_comp) (k9_funct_2 k5_numbers \\ & (k8_afinsq_1 (u1_compos_1 k1_ami_3))) k14_scm_comp X0) X1)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_dtconstr k1_scm_comp) \\
& (k9_funct_2 k5_numbers (k8_afinsq_1 (u1_compos_1 k1_ami_3)))) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 (k4_dtconstr k1_scm_comp) \\
& (k9_funct_2 k5_numbers (k8_afinsq_1 (u1_compos_1 k1_ami_3)))))) \Rightarrow \\
& ((X0 = k14_scm_comp) \Leftrightarrow ((\forall X1.(m2_subset_1 X1 (u1_struct_0 \\
& k1_scm_comp) (k6_dtconstr k1_scm_comp)) \Rightarrow (\exists X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 k5_numbers (k8_afinsq_1 (u1_compos_1 k1_ami_3))) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k8_afinsq_1 \\
& (u1_compos_1 k1_ami_3)))))) \wedge ((X2 = k3_funct_2 (k4_dtconstr \\
& k1_scm_comp) (k9_funct_2 k5_numbers (k8_afinsq_1 (u1_compos_1 \\
& k1_ami_3))) X0 (k3_scm_comp X1)) \wedge (\forall X3.(m2_subset_1 X3 \\
& k1_numbers k5_numbers) \Rightarrow (k3_funct_2 k5_numbers (k8_afinsq_1 \\
& (u1_compos_1 k1_ami_3)) X2 X3 = k5_afinsq_1 (k2_ami_3 (k10_ami_3 \\
& X3) (k4_scm_comp X1)))))) \wedge (\forall X1.(m2_subset_1 X1 (u1_struct_0 \\
& k1_scm_comp) (k7_dtconstr k1_scm_comp)) \Rightarrow (\forall X2.(m1_dtconstr \\
& X2 (u1_struct_0 k1_scm_comp) (k5_trees_3 (u1_struct_0 k1_scm_comp)) \\
& (k4_dtconstr k1_scm_comp)) \Rightarrow (\forall X3.(m1_dtconstr X3 (u1_struct_0 \\
& k1_scm_comp) (k5_trees_3 (u1_struct_0 k1_scm_comp)) (k4_dtconstr \\
& k1_scm_comp)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 k1_scm_comp)) \Rightarrow \\
& (\forall X5.(m1_subset_1 X5 (u1_struct_0 k1_scm_comp)) \Rightarrow (\neg (X4 = \\
& k1_bintree1 (u1_struct_0 k1_scm_comp) X2) \wedge ((X5 = k1_bintree1 \\
& (u1_struct_0 k1_scm_comp) X3) \wedge ((r1_lang1 k1_scm_comp X1 (k4_pre_poly \\
& (u1_struct_0 k1_scm_comp) X4 X5)) \wedge (\forall X6.((v1_funct_1 X6) \wedge \\
& ((v1_funct_2 X6 k5_numbers (k8_afinsq_1 (u1_compos_1 k1_ami_3))) \wedge \\
& (m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k8_afinsq_1 \\
& (u1_compos_1 k1_ami_3)))))) \Rightarrow (\forall X7.((v1_funct_1 X7) \wedge \\
& ((v1_funct_2 X7 k5_numbers (k8_afinsq_1 (u1_compos_1 k1_ami_3))) \wedge \\
& (m1_subset_1 X7 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k8_afinsq_1 \\
& (u1_compos_1 k1_ami_3)))))) \Rightarrow (\forall X8.((v1_funct_1 X8) \wedge \\
& ((v1_funct_2 X8 k5_numbers (k8_afinsq_1 (u1_compos_1 k1_ami_3))) \wedge \\
& (m1_subset_1 X8 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k8_afinsq_1 \\
& (u1_compos_1 k1_ami_3)))))) \Rightarrow (\neg (X6 = k3_funct_2 (k4_dtconstr \\
& k1_scm_comp) (k9_funct_2 k5_numbers (k8_afinsq_1 (u1_compos_1 \\
& k1_ami_3))) X0 (k2_scm_comp X1 X2 X3)) \wedge ((X7 = k3_funct_2 (k4_dtconstr \\
& k1_scm_comp) (k9_funct_2 k5_numbers (k8_afinsq_1 (u1_compos_1 \\
& k1_ami_3))) X0 X2) \wedge ((X8 = k3_funct_2 (k4_dtconstr k1_scm_comp) \\
& (k9_funct_2 k5_numbers (k8_afinsq_1 (u1_compos_1 k1_ami_3))) \\
& X0 X3) \wedge (\forall X9.(m2_subset_1 X9 k1_numbers k5_numbers) \Rightarrow (k3_funct_2 \\
& k5_numbers (k8_afinsq_1 (u1_compos_1 k1_ami_3)) X6 X9 = k1_ordinal4 \\
& (k15_afinsq_1 (u1_compos_1 k1_ami_3) (k3_funct_2 k5_numbers \\
& (k8_afinsq_1 (u1_compos_1 k1_ami_3)) X7 X9) (k3_funct_2 k5_numbers \\
& (k8_afinsq_1 (u1_compos_1 k1_ami_3)) X8 (k2_nat_1 X9 np_1))) \\
& (k13_scm_comp X1 X9)))))))))))))))))
\end{aligned} \tag{13}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 (u1_struct_0 k1_scm_comp) (k6_dtconstr \\ & k1_scm_comp)) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & (k15_scm_comp (k3_scm_comp X0) X1 = k5_afinsq_1 (k2_ami_3 (k10_ami_3 \\ & X1) (k4_scm_comp X0)))) \end{aligned}$$