

t40_compos_2

(TMHCgee5kQbUH8PgjMFWv8XzVpHyqNHeM88)

October 27, 2020

Let $v1_amistd_4 : \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $v3_compos_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_compos_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_compos_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_compos_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_compos_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_compos_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_amistd_4 X0) \wedge (l1_compos_1 X0)) \Rightarrow (\forall X1. \\ & ((v6_compos_0 X1 (u1_compos_1 X0)) \wedge (m1_subset_1 X1 (u1_compos_1 \\ & X0))) \Rightarrow (\forall X2.((v6_compos_0 X2 (u1_compos_1 X0)) \wedge (m1_subset_1 \\ & X2 (u1_compos_1 X0))) \Rightarrow (\forall X3.((v6_compos_0 X3 (u1_compos_1 \\ & X0)) \wedge (m1_subset_1 X3 (u1_compos_1 X0))) \Rightarrow (k2_compos_2 X0 (k3_compos_2 \\ & X0 X1 X2) X3 = k1_compos_2 X0 X1 (k3_compos_2 X0 X2 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_amistd_4 X0) \wedge (l1_compos_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge (v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge \\ & ((v5_relat_1 X1 (u1_compos_1 X0)) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\ & X1) \wedge ((v1_afinsq_1 X1) \wedge ((v3_compos_1 X1 X0) \wedge (v4_compos_1 X1 X0)))))))) \Rightarrow \\ & (\forall X2.((v6_compos_0 X2 (u1_compos_1 X0)) \wedge (m1_subset_1 \\ & X2 (u1_compos_1 X0))) \Rightarrow (\forall X3.((v6_compos_0 X3 (u1_compos_1 \\ & X0)) \wedge (m1_subset_1 X3 (u1_compos_1 X0))) \Rightarrow (\forall X4.((v6_compos_0 \\ & X4 (u1_compos_1 X0)) \wedge (m1_subset_1 X4 (u1_compos_1 X0))) \Rightarrow (\forall X5. \\ & ((v6_compos_0 X5 (u1_compos_1 X0)) \wedge (m1_subset_1 X5 (u1_compos_1 \\ & X0))) \Rightarrow (k1_funct_1 (k8_compos_1 X0 (k2_compos_2 X0 (k2_compos_2 \\ & X0 (k3_compos_2 X0 X2 X3) X4) X5) X1) k6_numbers = X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_amistd_4 X0) \wedge (l1_compos_1 X0)) \Rightarrow (\forall X1. \\
& ((v6_compos_0 X1 (u1_compos_1 X0)) \wedge (m1_subset_1 X1 (u1_compos_1 \\
& X0))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 X2) \wedge ((v4_relat_1 \\
& X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 X0)) \wedge ((v1_funct_1 \\
& X2) \wedge ((v1_finset_1 X2) \wedge ((v1_afinsq_1 X2) \wedge ((v3_compos_1 X2 X0) \wedge \\
& (v4_compos_1 X2 X0)))))))))) \Rightarrow (\forall X3.((\neg v1_xboole_0 X3) \wedge \\
& ((v1_relat_1 X3) \wedge ((v4_relat_1 X3 k5_numbers) \wedge ((v5_relat_1 X3 \\
& (u1_compos_1 X0)) \wedge ((v1_funct_1 X3) \wedge ((v1_finset_1 X3) \wedge ((v1_afinsq_1 \\
& X3) \wedge ((v3_compos_1 X3 X0) \wedge (v4_compos_1 X3 X0)))))))))) \Rightarrow (k8_compos_1 \\
& X0 (k2_compos_2 X0 X2 X1) X3 = k8_compos_1 X0 X2 (k1_compos_2 X0 X1 \\
& X3))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v1_amistd_4 X0) \wedge (l1_compos_1 \\
& X0)) \wedge (((v6_compos_0 X1 (u1_compos_1 X0)) \wedge (m1_subset_1 X1 (u1_compos_1 \\
& X0))) \wedge ((v6_compos_0 X2 (u1_compos_1 X0)) \wedge (m1_subset_1 X2 (u1_compos_1 \\
& X0)))))) \Rightarrow ((\neg v1_xboole_0 (k3_compos_2 X0 X1 X2)) \wedge ((v1_relat_1 \\
& (k3_compos_2 X0 X1 X2)) \wedge ((v4_relat_1 (k3_compos_2 X0 X1 X2) k5_numbers) \wedge \\
& ((v5_relat_1 (k3_compos_2 X0 X1 X2) (u1_compos_1 X0)) \wedge ((v1_funct_1 \\
& (k3_compos_2 X0 X1 X2)) \wedge ((v1_finset_1 (k3_compos_2 X0 X1 X2)) \wedge \\
& ((v1_afinsq_1 (k3_compos_2 X0 X1 X2)) \wedge ((v3_compos_1 (k3_compos_2 \\
& X0 X1 X2) X0) \wedge (v4_compos_1 (k3_compos_2 X0 X1 X2) X0))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v1_amistd_4 X0) \wedge (l1_compos_1 \\
& X0)) \wedge (((\neg v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge \\
& ((v5_relat_1 X1 (u1_compos_1 X0)) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\
& X1) \wedge ((v1_afinsq_1 X1) \wedge ((v3_compos_1 X1 X0) \wedge (v4_compos_1 X1 X0)))))))))) \wedge \\
& ((v6_compos_0 X2 (u1_compos_1 X0)) \wedge (m1_subset_1 X2 (u1_compos_1 \\
& X0)))))) \Rightarrow ((\neg v1_xboole_0 (k2_compos_2 X0 X1 X2)) \wedge ((v1_relat_1 \\
& (k2_compos_2 X0 X1 X2)) \wedge ((v4_relat_1 (k2_compos_2 X0 X1 X2) k5_numbers) \wedge \\
& ((v5_relat_1 (k2_compos_2 X0 X1 X2) (u1_compos_1 X0)) \wedge ((v1_funct_1 \\
& (k2_compos_2 X0 X1 X2)) \wedge ((v1_finset_1 (k2_compos_2 X0 X1 X2)) \wedge \\
& ((v1_afinsq_1 (k2_compos_2 X0 X1 X2)) \wedge ((v3_compos_1 (k2_compos_2 \\
& X0 X1 X2) X0) \wedge (v4_compos_1 (k2_compos_2 X0 X1 X2) X0))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((v1_amistd_4 X0)\wedge(l1_compos_1 \\
& X0))\wedge(((v6_compos_0 X1 (u1_compos_1 X0))\wedge(m1_subset_1 X1 (u1_compos_1 \\
& X0)))\wedge((\neg v1_xboole_0 X2)\wedge((v1_relat_1 X2)\wedge((v4_relat_1 X2 k5_numbers)\wedge \\
& ((v5_relat_1 X2 (u1_compos_1 X0))\wedge((v1_funct_1 X2)\wedge((v1_finset_1 \\
& X2)\wedge((v1_afinsq_1 X2)\wedge((v3_compos_1 X2 X0)\wedge(v4_compos_1 X2 X0))))))))))\Rightarrow \\
& ((\neg v1_xboole_0 (k1_compos_2 X0 X1 X2))\wedge((v1_relat_1 (k1_compos_2 \\
& X0 X1 X2))\wedge((v4_relat_1 (k1_compos_2 X0 X1 X2) k5_numbers)\wedge((v5_relat_1 \\
& (k1_compos_2 X0 X1 X2) (u1_compos_1 X0))\wedge((v1_funct_1 (k1_compos_2 \\
& X0 X1 X2))\wedge((v1_finset_1 (k1_compos_2 X0 X1 X2))\wedge((v1_afinsq_1 \\
& (k1_compos_2 X0 X1 X2))\wedge((v3_compos_1 (k1_compos_2 X0 X1 X2) X0)\wedge \\
& (v4_compos_1 (k1_compos_2 X0 X1 X2) X0))))))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_amistd_4 X0)\wedge(l1_compos_1 X0))\Rightarrow(\forall X1. \\
& ((\neg v1_xboole_0 X1)\wedge((v1_relat_1 X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge \\
& ((v5_relat_1 X1 (u1_compos_1 X0))\wedge((v1_funct_1 X1)\wedge((v1_finset_1 \\
& X1)\wedge((v1_afinsq_1 X1)\wedge((v3_compos_1 X1 X0)\wedge(v4_compos_1 X1 X0))))))))))\Rightarrow \\
& (\forall X2.((v6_compos_0 X2 (u1_compos_1 X0))\wedge(m1_subset_1 \\
& X2 (u1_compos_1 X0)))\Rightarrow(\forall X3.((v6_compos_0 X3 (u1_compos_1 \\
& X0))\wedge(m1_subset_1 X3 (u1_compos_1 X0)))\Rightarrow(\forall X4.((v6_compos_0 \\
& X4 (u1_compos_1 X0))\wedge(m1_subset_1 X4 (u1_compos_1 X0)))\Rightarrow(\forall X5. \\
& ((v6_compos_0 X5 (u1_compos_1 X0))\wedge(m1_subset_1 X5 (u1_compos_1 \\
& X0)))\Rightarrow(\forall X6.((v6_compos_0 X6 (u1_compos_1 X0))\wedge(m1_subset_1 \\
& X6 (u1_compos_1 X0)))\Rightarrow(k1_funct_1 (k8_compos_1 X0 (k2_compos_2 \\
& X0 (k2_compos_2 X0 (k2_compos_2 X0 (k3_compos_2 X0 X2 X3) X4) X5) \\
& X6) X1) k6_numbers = X2))))))
\end{aligned}$$