

t59_compos_1

(TMYeVHGUAkBFVLPy7uerVwwdXA5gx2WHxBf)

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Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_compos_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k4_compos_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k5_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ 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 $np_0 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(l1_compos_1 X0) \Rightarrow (k6_numbers \in k2_afinsq_1 (k4_compos_1 X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge ((v5_ordinal1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1)))) \Rightarrow ((X1 = k5_afinsq_1 X0) \Leftrightarrow ((k1_afinsq_1 X1 = np_1) \wedge (k1_funct_1 X1 k6_numbers = X0))) \quad (3)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (4)$$

Assume the following.

$$v1_xboole_0 \text{ } np_0 \quad (5)$$

Assume the following.

$$k2_xcmplx_0 \text{ } np_1 \text{ } np_0 = np_1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((l1_compos_1 \text{ } X0)\wedge(m1_subset_1 \text{ } X1 \text{ } (u1_compos_1 \text{ } X0)))\Rightarrow(k9_compos_1 \text{ } X0 \text{ } X1 = k3_afinsq_1 \text{ } X1) \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$\forall X0.k5_afinsq_1 \text{ } X0 = k3_afinsq_1 \text{ } X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \text{ } X0 \text{ } k5_numbers)\wedge(v7_ordinal1 \text{ } X1))\Rightarrow(k2_nat_1 \text{ } X0 \text{ } X1 = k2_xcmplx_0 \text{ } X0 \text{ } X1) \quad (10)$$

Assume the following.

$$\forall X0.(v5_ordinal1 \text{ } (k3_afinsq_1 \text{ } X0))\wedge(v1_finset_1 \text{ } (k3_afinsq_1 \text{ } X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((l1_compos_1 \text{ } X0)\wedge(m1_subset_1 \text{ } X1 \text{ } (u1_compos_1 \text{ } X0)))\Rightarrow((v1_relat_1 \text{ } (k9_compos_1 \text{ } X0 \text{ } X1))\wedge((v4_relat_1 \text{ } (k9_compos_1 \text{ } X0 \text{ } X1) \text{ } k5_numbers)\wedge((v5_relat_1 \text{ } (k9_compos_1 \text{ } X0 \text{ } X1) \text{ } (u1_compos_1 \text{ } X0))\wedge((v1_funct_1 \text{ } (k9_compos_1 \text{ } X0 \text{ } X1))\wedge(v1_finset_1 \text{ } (k9_compos_1 \text{ } X0 \text{ } X1)))))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_relat_1 \text{ } (k5_afinsq_1 \text{ } X0))\wedge(v1_funct_1 \text{ } (k5_afinsq_1 \text{ } X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 \text{ } X0)\wedge((v5_ordinal1 \text{ } X0)\wedge(v1_funct_1 \text{ } X0)))\wedge((v1_relat_1 \text{ } X1)\wedge((v5_ordinal1 \text{ } X1)\wedge(v1_funct_1 \text{ } X1))))\Rightarrow((v1_relat_1 \text{ } (k1_ordinal4 \text{ } X0 \text{ } X1))\wedge((v5_ordinal1 \text{ } (k1_ordinal4 \text{ } X0 \text{ } X1))\wedge(v1_funct_1 \text{ } (k1_ordinal4 \text{ } X0 \text{ } X1)))) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v5_ordinal1 \\ X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1)))) \Rightarrow (\forall X2.((v1_relat_1 \\ X2) \wedge ((v5_ordinal1 X2) \wedge (v1_funct_1 X2))) \Rightarrow ((X2 = k1_ordinal4 X0 \\ X1) \Leftrightarrow ((k9_xtuple_0 X2 = k2_nat_1 (k1_afinsq_1 X0) (k1_afinsq_1 \\ X1)) \wedge ((\forall X3.(v7_ordinal1 X3) \Rightarrow ((X3 \in k2_afinsq_1 X0) \Rightarrow (k1_funct_1 \\ X2 X3 = k1_funct_1 X0 X3))) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow ((X3 \in \\ k2_afinsq_1 X1) \Rightarrow (k1_funct_1 X2 (k2_nat_1 (k1_afinsq_1 X0) X3) = \\ k1_funct_1 X1 X3)))))))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(l1_compos_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_compos_1 \\ X0)) \Rightarrow (k11_compos_1 X0 X1 = k10_compos_1 X0 (k9_compos_1 X0 X1))) \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_compos_1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 (u1_compos_1 X0)) \wedge \\ ((v1_funct_1 X1) \wedge ((v1_finset_1 X1) \wedge (v1_afinsq_1 X1)))))) \Rightarrow (\\ k10_compos_1 X0 X1 = k1_ordinal4 X1 (k4_compos_1 X0))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.(l1_compos_1 X0) \Rightarrow (k4_compos_1 X0 = k3_afinsq_1 (k2_compos_1 \\ X0)) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v7_ordinal1 X0) \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow ((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge \\ ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0)))))) \end{aligned} \quad (20)$$

Theorem 1

$$\forall X0.(l1_compos_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_compos_1 \\ X0)) \Rightarrow (k1_funct_1 (k11_compos_1 X0 X1) np_1 = k2_compos_1 X0))$$