

t29_compos_2

(TMSoKtvVaQvefu7rn1Ldd7kGDf4nx2czBFt)

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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 $k62_valued_1 : \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k63_valued_1 : \iota \Rightarrow \iota$ be given. Let $k1_xreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0)))))) \Rightarrow \quad (1) \\ (k62_valued_1 X0 = k7_nat_d (k5_card_1 X0) np_1) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)))))) \Rightarrow (k5_card_1 (k63_valued_1 \\ X0) = k6_xcmplx_0 (k5_card_1 X0) np_1) \quad (2) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (k6_xcmplx_0 \\ (k5_card_1 X0) np_1 = k1_xreal_0 (k5_card_1 X0) np_1) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (4) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(v7_ordinal1\ X1))\Rightarrow(k7_nat_d\ X0\ X1 = k1_xreal_0\ X0\ X1) \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.(v1_finset_1\ X0)\Rightarrow(k5_card_1\ X0 = k1_card_1\ X0) \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v5_ordinal1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finset_1\ X0))))\Rightarrow(k1_card_1\ X0 = k9_xtuple_0\ X0) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v5_ordinal1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finset_1\ X0))))\Rightarrow(v7_ordinal1\ (k9_xtuple_0\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v4_relat_1\ X0\ k5_numbers)\wedge((v1_funct_1\ X0)\wedge((v1_finset_1\ X0)\wedge(v1_afinsq_1\ X0)))))\Rightarrow((v1_relat_1\ X0)\wedge((v5_ordinal1\ X0)\wedge(v1_funct_1\ X0))) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (11)$$

Theorem 1

$$\forall X0.((v1_amistd_4\ X0)\wedge(l1_compos_1\ X0))\Rightarrow(\forall X1.((\neg v1_xboole_0\ X1)\wedge((v1_relat_1\ X1)\wedge((v4_relat_1\ X1\ k5_numbers)\wedge((v5_relat_1\ X1\ (u1_compos_1\ X0))\wedge((v1_funct_1\ X1)\wedge((v1_finset_1\ X1)\wedge((v1_afinsq_1\ X1)\wedge((v3_compos_1\ X1\ X0)\wedge(v4_compos_1\ X1\ X0))))))))))\Rightarrow(k62_valued_1\ X1 = k6_xcmplx_0\ (k5_card_1\ X1)\ np_1))$$