

t26_compos_2

(TMV8vLinC2vLHTNirDhcVstS4xPZFrNhsWV)

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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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k62_valued_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k63_valued_1 : \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. k16_funcop_1 X0 X1 = k1_tarski (k4_tarski X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0))))) \Rightarrow \\ (k62_valued_1 X0 = k7_nat_d (k5_card_1 X0) np_1) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0))))) \Rightarrow (\forall X1. (v7_ordinal1 \\ X1) \Rightarrow ((X1 \in k2_afinsq_1 X0) \Leftrightarrow (\neg r1_xxreal_0 (k5_card_1 X0) X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(k1_card_1 X0 = np_1) \Leftrightarrow (\exists X1.X0 = k1_tarski X1) \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)))))) \Rightarrow (k5_card_1 (k63_valued_1 X0) = k6_xcmplx_0 (k5_card_1 X0) np_1) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (k6_xcmplx_0 (k5_card_1 X0) np_1 = k1_xreal_0 (k5_card_1 X0) np_1) \quad (7)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k7_nat_d X0 X1 = k1_xreal_0 X0 X1) \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \Rightarrow (k2_afinsq_1 X0 = k9_xtuple_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \Rightarrow (k1_card_1 X0 = k9_xtuple_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.(v5_ordinal1 (k3_afinsq_1 X0)) \wedge (v1_finset_1 (k3_afinsq_1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow ((v1_finset_1 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0)))))) \Rightarrow \\ ((v1_relat_1 (k63_valued_1 X0)) \wedge ((v1_funct_1 (k63_valued_1 \\ X0)) \wedge (v1_afinsq_1 (k63_valued_1 X0)))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow (v7_ordinal1 (k9_xtuple_0 X0)) \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)))))) \Rightarrow ((v1_relat_1 (\\ k63_valued_1 X0)) \wedge ((v4_relat_1 (k63_valued_1 X0) \ k5_numbers) \wedge \\ ((v1_funct_1 (k63_valued_1 X0)) \wedge (v1_finset_1 (k63_valued_1 \\ X0)))))) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)))))) \Rightarrow ((v1_relat_1 (\\ k63_valued_1 X0)) \wedge (v1_funct_1 (k63_valued_1 X0))) \quad (19)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (20)$$

Assume the following.

$$\forall X0.k3_afinsq_1 X0 = k16_funcop_1 \ k6_numbers \ X0 \quad (21)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0)))))) \Rightarrow ((v1_relat_1 X0) \wedge \\ ((v5_ordinal1 X0) \wedge (v1_funct_1 X0))) \end{aligned} \quad (22)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \quad (23)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (24)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_amistd_4 X0) \wedge (l1_compos_1 X0)) \Rightarrow (\forall X1. \\ ((\neg v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 \ k5_numbers) \wedge \\ ((v5_relat_1 X1 (u1_compos_1 X0)) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\ X1) \wedge ((v1_afinsq_1 X1) \wedge ((v3_compos_1 X1 \ X0) \wedge (v4_compos_1 X1 \ X0)))))))))) \Rightarrow \\ (\forall X2.(v7_ordinal1 X2) \Rightarrow ((\neg r1_xreal_0 (k62_valued_1 X1) \\ X2) \Leftrightarrow (X2 \in k9_xtuple_0 (k63_valued_1 X1)))))) \end{aligned}$$