

t43_compos_1

(TMTBb5uRPNRHDS9padmth5RsV53Xqxu6Am)

October 27, 2020

Let $l1_compos_1 : \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k6_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k61_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_compos_1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ (v7_ordinal1 X2) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge ((v4_relat_1 \\ X3 k5_numbers) \wedge ((v5_relat_1 X3 (u1_compos_1 X0)) \wedge ((v1_funct_1 \\ X3) \wedge (v1_finset_1 X3)))))) \Rightarrow (k61_valued_1 (k5_compos_1 X0 X3 X1) \\ X2 = k5_compos_1 X0 (k61_valued_1 X3 X2) X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (k61_valued_1 (k61_valued_1 \\ X2 X1) X0 = k61_valued_1 X2 (k2_xcmplx_0 X1 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ (l1_compos_1 X2) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge ((v4_relat_1 \\ X3 k5_numbers) \wedge ((v5_relat_1 X3 (u1_compos_1 X2)) \wedge ((v1_funct_1 \\ X3) \wedge (v1_finset_1 X3)))))) \Rightarrow (k5_compos_1 X2 (k5_compos_1 X2 X3 X0) \\ X1 = k5_compos_1 X2 X3 (k2_xcmplx_0 X0 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (v7_ordinal1 (k2_xcmplx_0 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge(v7_ordinal1 X1))\Rightarrow((v1_relat_1 (k61_valued_1 X0 X1))\wedge((v4_relat_1 (k61_valued_1 X0 X1) k5_numbers)\wedge(v1_funct_1 (k61_valued_1 X0 X1)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1_compos_1 X0)\wedge(((v1_relat_1 X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 (u1_compos_1 X0))\wedge((v1_funct_1 X1)\wedge(v1_finset_1 X1))))))\wedge(v7_ordinal1 X2))\Rightarrow((v1_relat_1 (k6_compos_1 X0 X1 X2))\wedge((v4_relat_1 (k6_compos_1 X0 X1 X2) k5_numbers)\wedge((v5_relat_1 (k6_compos_1 X0 X1 X2) (u1_compos_1 X0))\wedge((v1_funct_1 (k6_compos_1 X0 X1 X2))\wedge(v1_finset_1 (k6_compos_1 X0 X1 X2)))))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge(v7_ordinal1 X1))\Rightarrow((v1_relat_1 (k61_valued_1 X0 X1))\wedge(v1_funct_1 (k61_valued_1 X0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1_compos_1 X0)\wedge(((v1_relat_1 X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 (u1_compos_1 X0))\wedge((v1_funct_1 X1)\wedge(v1_finset_1 X1))))))\wedge(v7_ordinal1 X2))\Rightarrow((v1_relat_1 (k5_compos_1 X0 X1 X2))\wedge((v4_relat_1 (k5_compos_1 X0 X1 X2) k5_numbers)\wedge((v5_relat_1 (k5_compos_1 X0 X1 X2) (u1_compos_1 X0))\wedge((v1_funct_1 (k5_compos_1 X0 X1 X2))\wedge(v1_finset_1 (k5_compos_1 X0 X1 X2)))))) \quad (8)$$

Assume the following.

$$\forall X0.(l1_compos_1 X0)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 (u1_compos_1 X0))\wedge((v1_funct_1 X1)\wedge(v1_finset_1 X1))))))\Rightarrow(\forall X2.(v7_ordinal1 X2)\Rightarrow(k6_compos_1 X0 X1 X2 = k61_valued_1 (k5_compos_1 X0 X1 X2) X2)) \quad (9)$$

Theorem 1

$$\forall X0.(l1_compos_1 X0)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 (u1_compos_1 X0))\wedge((v1_funct_1 X1)\wedge(v1_finset_1 X1))))))\Rightarrow(\forall X2.(v7_ordinal1 X2)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow(k6_compos_1 X0 (k6_compos_1 X0 X1 X2) X3 = k6_compos_1 X0 X1 (k2_xcmplx_0 X2 X3))))$$