

t61_rcomp_3
(TMH5UQk6CY6SFeXEnbPmahpEZaXR9yo6CHb)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_topmetr : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_rcomp_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_rcomp_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_rcomp_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((X2 = k10_finseq_1 X0 X1) \Leftrightarrow ((k3_finseq_1 X2 = np_2) \wedge ((k1_funct_1 X2 np_1 = X0) \wedge (k1_funct_1 X2 np_2 = X1)))) \quad (1)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (2)$$

Assume the following.

$$k2_xcmplx_0 np_1 np_1 = np_2 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_xreal_0 X0)\wedge \\ & ((v1_xreal_0 X1)\wedge((m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 \\ & (u1_struct_0 (k4_topmetr X0 X1))))))\wedge(m1_rcomp_3 X3 X0 X1 X2))))\Rightarrow \\ & (\forall X4.(m2_rcomp_3 X4 X0 X1 X2 X3)\Rightarrow(m2_finseq_1 X4 k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 (k4_topmetr \\ & X0 X1))))))\Rightarrow(\forall X3.(m1_rcomp_3 X3 X0 X1 X2)\Rightarrow(((m1_setfam_1 \\ & X2 (u1_struct_0 (k4_topmetr X0 X1))\wedge(v1_tops_2 X2 (k4_topmetr \\ & X0 X1))\wedge((v1_rcomp_3 X2 (k4_topmetr X0 X1))\wedge(r1_xxreal_0 X0 X1))))\Rightarrow \\ & (\forall X4.(m2_finseq_1 X4 k1_numbers)\Rightarrow((m2_rcomp_3 X4 X0 X1 \\ & X2 X3)\Leftrightarrow((k3_finseq_1 X4 = k2_nat_1 (k3_finseq_1 X3) np_1)\wedge((k1_funct_1 \\ & X4 np_1 = X0)\wedge((k1_funct_1 X4 (k3_finseq_1 X4) = X1)\wedge(\forall X5. \\ & (v7_ordinal1 X5)\Rightarrow((r1_xxreal_0 np_1 X5)\Rightarrow((r1_xxreal_0 (k3_finseq_1 \\ & X4) (k1_nat_1 X5 np_1))\vee(k1_funct_1 X4 (k1_nat_1 X5 np_1) \in k2_rcomp_1 \\ & (k5_seq_4 (k7_partfun1 (k9_setfam_1 k1_numbers) X3 (k1_nat_1 \\ & X5 np_1))) (k4_seq_4 (k7_partfun1 (k9_setfam_1 k1_numbers) X3 \\ & X5)))))))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v6_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v7_ordinal1 X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 (k4_topmetr \\ & X0 X1)))))) \Rightarrow (\forall X3.(m1_rcomp_3 X3 X0 X1 X2) \Rightarrow (\forall X4.(m2_rcomp_3 \\ & X4 X0 X1 X2 X3) \Rightarrow (((m1_setfam_1 X2 (u1_struct_0 (k4_topmetr X0 X1))) \wedge \\ & ((v1_tops_2 X2 (k4_topmetr X0 X1)) \wedge ((v1_rcomp_3 X2 (k4_topmetr \\ & X0 X1)) \wedge ((r1_xxreal_0 X0 X1) \wedge (k3_finseq_1 X3 = np_1)))))) \Rightarrow (X4 = \\ & k10_finseq_1 X0 X1)))))) \end{aligned}$$