

t26_flang_2 (TMTGJEQKTPb- wiGTj1wRexrqrHiRQ2eWFwRN)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k8_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_flang_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_catalan2 : \iota \Rightarrow \iota$ be given. Let $k7_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\neg \\ & (r1_xxreal_0\ X0\ (k1_nat_1\ X1\ np_1)) \wedge ((\neg r1_xxreal_0\ X0\ X1) \wedge (X0 \neq \\ & k1_nat_1\ X1\ np_1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k8_afinsq_1 \\ & X0))) \Rightarrow (\forall X2.(v7_ordinal1\ X2) \Rightarrow (\forall X3.(v7_ordinal1 \\ & X3) \Rightarrow (\forall X4.(v7_ordinal1\ X4) \Rightarrow (((r1_xxreal_0\ X2\ X3) \wedge (r1_xxreal_0 \\ & X3\ X4)) \Rightarrow (k1_flang_2\ X0\ X1\ X2\ X4 = k4_subset_1\ (k8_afinsq_1\ X0)\ (k1_flang_2 \\ & X0\ X1\ X2\ X3)\ (k1_flang_2\ X0\ X1\ (k2_xcmplx_0\ X3\ np_1)\ X4)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k8_afinsq_1 \\ & X0))) \Rightarrow (\forall X2.(v7_ordinal1\ X2) \Rightarrow (k1_flang_2\ X0\ X1\ X2\ X2 = k7_flang_1 \\ & X0\ X1\ X2)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k8_afinsq_1 \\ & X0))) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 \\ & X3) \Rightarrow ((k1_flang_2 X0 X1 X2 X3 = k1_xboole_0) \Leftrightarrow (\neg(r1_xxreal_0 X2 X3) \wedge \\ & (\neg(\neg r1_xxreal_0 X2 k6_numbers) \wedge (X1 = k1_xboole_0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.k2_xboole_0 X0 k1_xboole_0 = X0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\\ & \neg r1_xxreal_0 (k1_nat_1 X1 np_1) X0) \Leftrightarrow (r1_xxreal_0 X0 X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = \\ & k2_xboole_0 X1 X2) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.k3_catalan2 X0 = k8_afinsq_1 X0 \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1 X0) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow \\ & (k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (\\ & v7_ordinal1 (k2_xcmplx_0 X0 X1)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & (k3_catalan2 X0))) \wedge (v7_ordinal1 X2)) \Rightarrow (m1_subset_1 (k7_flang_1 \\ & X0 X1 X2) (k1_zfmisc_1 (k3_catalan2 X0))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X1 (k1_zfmisc_1 (k8_afinsq_1 X0)))\wedge((v7_ordinal1 X2)\wedge(v7_ordinal1 X3)))\Rightarrow(m1_subset_1 (k1_flang_2 X0 X1 X2 X3) (k1_zfmisc_1 (k8_afinsq_1 X0)))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xxreal_0 X0) \quad (18)$$

Theorem 1

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k8_afinsq_1 X0)))\Rightarrow(\forall X2.(v7_ordinal1 X2)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow((r1_xxreal_0 X2 (k2_xcmplx_0 X3 np_1))\Rightarrow(k1_flang_2 X0 X1 X2 (k2_xcmplx_0 X3 np_1) = k4_subset_1 (k3_catalan2 X0) (k1_flang_2 X0 X1 X2 X3) (k7_flang_1 X0 X1 (k2_xcmplx_0 X3 np_1))))))$$