

t29_flang_1 (TM-
cuTy72EQ3WrFX4zRSdwES3dU9N1GgvQgf)

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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 $k3_catalan2 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k7_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_flang_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_xboole_0 : \iota$ be given. Let $k4_afinsq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\neg(X0 \neq k6_numbers) \wedge (\forall X1. \\ (v7_ordinal1\ X1) \Rightarrow (X0 \neq k1_nat_1\ X1\ np_1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(v7_ordinal1\ X1) \Rightarrow (k7_flang_1\ X0\ (k4_flang_1 \\ X0\ (k2_flang_1\ X0))\ X1 = k4_flang_1\ X0\ (k2_flang_1\ X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k3_catalan2 \\ X0))) \Rightarrow (k7_flang_1\ X0\ X1\ k6_numbers = k4_flang_1\ X0\ (k2_flang_1 \\ X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k3_catalan2 \\ X0))) \Rightarrow (\forall X2.(v7_ordinal1\ X2) \Rightarrow (k7_flang_1\ X0\ X1\ (k2_xcmplx_0 \\ X2\ np_1) = k6_flang_1\ X0\ (k7_flang_1\ X0\ X1\ X2)\ X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k3_catalan2 \\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k3_catalan2 \\ X0))) \Rightarrow ((k6_flang_1\ X0\ X1\ X2 = k4_flang_1\ X0\ (k2_flang_1\ X0)) \Leftrightarrow ((\\ X1 = k4_flang_1\ X0\ (k2_flang_1\ X0)) \wedge (X2 = k4_flang_1\ X0\ (k2_flang_1 \\ X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0. k2_flang_1 \ X0 = k4_afinsq_1 \ X0 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7_ordinal1 \ X0) \wedge (m1_subset_1 \ X1 \ k5_numbers)) \Rightarrow \\ & (k1_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 \ X1 \ (k1_zfmisc_1 \\ & (k3_catalan2 \ X0))) \wedge (v7_ordinal1 \ X2)) \Rightarrow (m1_subset_1 \ (k7_flang_1 \\ & X0 \ X1 \ X2) \ (k1_zfmisc_1 \ (k3_catalan2 \ X0))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k3_catalan2 \\ & X0))) \Rightarrow (\forall X2. (v7_ordinal1 \ X2) \Rightarrow ((k7_flang_1 \ X0 \ X1 \ X2 = k4_flang_1 \\ & X0 \ (k2_flang_1 \ X0)) \Leftrightarrow ((X2 = k6_numbers) \vee (X1 = k4_flang_1 \ X0 \ (k2_flang_1 \\ & X0)))))) \end{aligned}$$