

t57_flang_1

(TMQjqzwvQXhBgq9EZSJtNLfLnpFG36pN6N1)

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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 $k6_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_flang_1 : \iota \Rightarrow \iota$ be given. Let $k7_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow ((k8_flang_1 X0 X1 = k4_subset_1 (k3_catalan2 X0) (k4_flang_1 \\ & X0) (k2_flang_1 X0)) (k6_flang_1 X0 X1 (k8_flang_1 X0 X1))) \wedge (k8_flang_1 \\ & X0 X1 = k4_subset_1 (k3_catalan2 X0) (k4_flang_1 X0) (k2_flang_1 \\ & X0)) (k6_flang_1 X0 (k8_flang_1 X0 X1) X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow (k7_flang_1 X0 X1 k6_numbers = k4_flang_1 X0 (k2_flang_1 \\ & X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow ((k4_subset_1 (k3_catalan2 X0) (k6_flang_1 X0 X1 X2) (k6_flang_1 \\ & X0 X1 X3) = k6_flang_1 X0 X1 (k4_subset_1 (k3_catalan2 X0) X2 X3)) \wedge \\ & (k4_subset_1 (k3_catalan2 X0) (k6_flang_1 X0 X2 X1) (k6_flang_1 \\ & X0 X3 X1) = k6_flang_1 X0 (k4_subset_1 (k3_catalan2 X0) X2 X3) X1)))))) \end{aligned} \tag{3}$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow (k6_flang_1 X0 (k6_flang_1 X0 X1 X2) X3 = k6_flang_1 X0 X1 (\\ & k6_flang_1 X0 X2 X3)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow ((k6_flang_1 X0 X1 (k4_flang_1 X0 (k2_flang_1 X0)) = X1) \wedge \\ & (k6_flang_1 X0 (k4_flang_1 X0 (k2_flang_1 X0)) X1 = X1)) \end{aligned} \quad (6)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow (m1_subset_1 (k8_flang_1 X0 X1) (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & (k3_catalan2 X0))) \wedge (v7_ordinal1 X2)) \Rightarrow (m1_subset_1 (k7_flang_1 \\ & X0 X1 X2) (k1_zfmisc_1 (k3_catalan2 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & (k3_catalan2 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k3_catalan2 \\ & X0)))) \Rightarrow (m1_subset_1 (k6_flang_1 X0 X1 X2) (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k3_catalan2 \\ & X0))) \Rightarrow (k8_flang_1 X0 X1 = k3_tarski (ReplSep (toset (\lambda X2 : \iota. \\ & m1_subset_1 X2 (k1_zfmisc_1 (k3_catalan2 X0)))) (\lambda X2 : \iota. \\ & \exists X3.(v7_ordinal1 X3) \wedge (X2 = k7_flang_1 X0 X1 X3)) (\lambda X2 : \\ & \iota.X2))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (12)$$

Theorem 1

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k3_catalan2 X0)))\Rightarrow(k6_flang_1 X0 X1 (k8_flang_1 X0 X1) = k6_flang_1 X0 (k8_flang_1 X0 X1) X1)$$