

t7_stirl2_1 (TMV-
duxLXe8VUYtDF9QgSMrhLDoqGCNvPJdV)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k5_nat_1 : \iota \Rightarrow \iota$ be given. Let $k8_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_seq_4 : \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k5_numbers) \Rightarrow ((k5_nat_1 (k7_domain_1 k5_numbers X0 X1) = k6_nat_1 \\ & X0 X1) \wedge (k6_seq_4 (k7_domain_1 k5_numbers X0 X1) = k6_nat_1 X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow ((k5_nat_1 (k6_domain_1 \\ & k5_numbers X0) = X0) \wedge (k6_seq_4 (k6_domain_1 k5_numbers X0) = X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers))) \Rightarrow \\ & (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & k5_numbers)))) \Rightarrow (k6_nat_1 (k6_seq_4 X0) (k6_seq_4 X1) = k6_seq_4 \\ & (k4_subset_1 k5_numbers X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.k1_enumset1 X0 X1 X2 = k2_xboole_0 \\ & (k1_tarski X0) (k2_tarski X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers))) \Rightarrow \\ & (k6_seq_4 X0 = k5_nat_1 X0) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((m1_subset_1 X1 X0)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X0))))\Rightarrow \\ & (k8_domain_1 X0 X1 X2 X3 = k1_enumset1 X1 X2 X3) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 \\ & X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k7_domain_1 X0 X1 X2 = k2_tarski X1 \\ & X2) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow \\ & (k6_domain_1 X0 X1 = k1_tarski X1) \end{aligned} \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(k4_subset_1 X0 X1 X2 = \\ & k2_xboole_0 X1 X2) \end{aligned} \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\neg v1_xboole_0 (k2_tarski X0 X1) \quad (12)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_tarski X0) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\neg v1_xboole_0 (k1_enumset1 X0 \\ & X1 X2) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 \\ & X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m1_subset_1 (k7_domain_1 X0 X1 X2) \\ & (k1_zfmisc_1 X0)) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(m1_subset_1 (k4_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \quad (18)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.(m1_subset_1 X1 k5_numbers)\Rightarrow(\forall X2.(m1_subset_1 X2 k5_numbers)\Rightarrow(k5_nat_1 (k8_domain_1 k5_numbers X0 X1 X2) = k6_nat_1 X0 (k6_nat_1 X1 X2))))$$