

t1_stirl2_1 (TMHwCMqWe- LyU8X2kNPPKXXvdYPzg4jJbPuD)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_seq_4 : \iota \Rightarrow \iota$ be given. Let $k5_nat_1 : \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k2_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $v5_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_2 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v4_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v6_membered X0)) \Rightarrow (k6_seq_4 X0 = k2_xxreal_2 X0) \quad (1)$$

Assume the following.

$$\forall X0.((v5_membered X0) \wedge (v1_xxreal_2 X0)) \Rightarrow ((v1_xxreal_0 (k2_xxreal_2 X0)) \wedge (v1_int_1 (k2_xxreal_2 X0))) \quad (2)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v6_membered X0)) \Rightarrow (m2_subset_1 (k6_seq_4 X0) k1_numbers k5_numbers) \quad (3)$$

Assume the following.

$$\forall X0.((v2_membered X0) \wedge (v1_xxreal_2 X0)) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow ((X1 = k2_xxreal_2 X0) \Leftrightarrow ((X1 \in X0) \wedge (\forall X2. (v1_xxreal_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0 X1 X2)))))) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & (((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers))) \Rightarrow \\ & ((X1 = k5_nat_1 X0) \Leftrightarrow ((X1 \in X0) \wedge (\forall X2. (v7_ordinal1 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0 X1 X2)))))) \wedge ((\neg(\neg v1_xboole_0 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers))) \Rightarrow ((X1 = k5_nat_1 X0) \Leftrightarrow (X1 = k6_numbers))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (6)$$

Assume the following.

$$\forall X0.((v6_membered\ X0)\wedge(\neg v1_xboole_0\ X0))\Rightarrow((v6_membered\ X0)\wedge((\neg v1_xboole_0\ X0)\wedge(v1_xxreal_2\ X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v4_membered\ X0)\Rightarrow(v3_membered\ X0) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (9)$$

Assume the following.

$$\forall X0.(v5_membered\ X0)\Rightarrow(v4_membered\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(v5_membered\ X0) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k5_numbers))\Rightarrow(v6_membered\ X0) \quad (12)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0\ X0)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ k5_numbers)))\Rightarrow(k6_seq_4\ X0 = k5_nat_1\ X0)$$