

t14_stirl2_1

(TMSrFmQD53PDicCarmHopNSij2pNh6xLRZd)

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Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k5_nat_1 : \iota \Rightarrow \iota$ be given. Let $k21_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1_xboole_0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\neg(X1 \neq k1_xboole_0) \wedge (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\neg X2 \in X1))) \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (r1_xxreal_0 k6_numbers X0) \quad (4)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 k5_numbers))) \Rightarrow ((r1_tarski X1 X0) \Rightarrow (r1_xxreal_0 (k5_nat_1 X1) (k21_binop_2 X0 np_1)))) \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k5_nat_1 X0 = k6_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X0 \in X1) \Rightarrow ((r1_xxreal_0 X0 (k21_binop_2 X1 np_1)) \wedge (m1_subset_1 (k21_binop_2 X1 np_1) k5_numbers)))) \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$m2_subset_1 \ k6_numbers \ k1_numbers \ k5_numbers \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_subset_1 \ X1 \ k1_numbers \ k5_numbers) \Rightarrow \\ & (((\neg v1_xboole_0 \ X0) \wedge (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ k5_numbers))) \Rightarrow \\ & ((X1 = k5_nat_1 \ X0) \Leftrightarrow ((X1 \in X0) \wedge (\forall X2. (v7_ordinal1 \ X2) \Rightarrow ((\\ & X2 \in X0) \Rightarrow (r1_xxreal_0 \ X1 \ X2)))))) \wedge ((\neg(\neg v1_xboole_0 \ X0) \wedge (m1_subset_1 \\ & X0 \ (k1_zfmisc_1 \ k5_numbers))) \Rightarrow ((X1 = k5_nat_1 \ X0) \Leftrightarrow (X1 = k6_numbers)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. (v1_xboole_0 \ X0) \Rightarrow (v7_ordinal1 \ X0) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0. (v7_ordinal1 \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \\ & k5_numbers)) \Rightarrow ((r1_tarski \ X1 \ X0) \Rightarrow ((r1_xxreal_0 \ X0 \ k6_numbers) \vee \\ & (r1_xxreal_0 \ (k5_nat_1 \ X1) \ (k21_binop_2 \ X0 \ np_1)))) \end{aligned}$$