

t33_stirl2_1

(TMdofDihtAToispqcecxrSCDQhZx2um21o4)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_stirl2_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_stirl2_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge ((\neg v3_xxreal_0 X1) \wedge (\neg v2_xxreal_0 X0)))) \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((X0\neq k6_numbers)\Rightarrow(k3_stirl2_1\ X0\ k6_numbers = k6_numbers)) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow((\neg r1_xreal_0\ X1\ X0)\Rightarrow(k3_stirl2_1\ X0\ X1 = k6_numbers))) \quad (7)$$

Assume the following.

$$\begin{aligned} &\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\neg \\ &((X0 = k6_numbers)\Rightarrow(X1 = k6_numbers))\wedge(((X1 = k6_numbers)\Rightarrow(X0 = \\ &k6_numbers))\wedge((r1_xreal_0\ X1\ X0)\wedge(\forall X2.((v1_funct_1 \\ &X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ &X0\ X1))))))\Rightarrow(\neg(v2_funct_2\ X2\ X1)\wedge(v1_stirl2_1\ X2\ X0\ X1)))))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow((\neg r1_xreal_0\ (k1_nat_1\ X1\ np_1)\ X0)\Leftrightarrow(r1_xreal_0\ X0\ X1))) \quad (9)$$

Assume the following.

$$\begin{aligned} &((v2_xreal_0\ np_1)\wedge(m2_subset_1\ np_1\ k1_numbers\ k5_numbers))\wedge \\ &((m1_subset_1\ np_1\ k5_numbers)\wedge(m1_subset_1\ np_1\ k1_numbers)) \quad (10) \end{aligned}$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (11)$$

Assume the following.

$$k2_xcmplx_0\ np_0\ np_1 = np_1 \quad (12)$$

Assume the following.

$$\neg r1_xreal_0\ np_1\ np_0 \quad (13)$$

Assume the following.

$$r1_xreal_0\ np_0\ np_0 \quad (14)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (15)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow(k1_nat_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \quad (17)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge(v1_xxreal_0 X0) \quad (18)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge((v1_xcmplx_0 X0)\wedge((v1_xxreal_0 X0)\wedge(v1_xreal_0 X0))) \quad (19)$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(v1_xboole_0 X1) \quad (20)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (21)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow((\neg v1_xboole_0 (k1_card_1 X0))\wedge(v1_card_1 (k1_card_1 X0))) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(m1_subset_1 (k3_stirl2_1 X0 X1) k5_numbers) \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(v7_ordinal1 X1)\Rightarrow(k3_stirl2_1 \\ X0 X1 = k1_card_1 (ReplSep (toset (\lambda X2 : \iota.(v1_funct_1 X2)\wedge \\ ((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X1)))))) (\lambda X2 : \iota.(v2_funct_2 X2 X1)\wedge(v1_stirl2_1 X2 X0 \\ X1)) (\lambda X2 : \iota.X2)))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v7_ordinal1 X0) \quad (26)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v2_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v3_xxreal_0 X0))) \quad (27)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v7_ordinal1\ X0)\wedge(\neg v3_xxreal_0\ X0)) \quad (28)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (29)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (30)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (31)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow((\\ & \neg(((r1_xxreal_0\ np_1\ X0)\wedge(r1_xxreal_0\ X0\ X1))\vee(X0 = X1))\wedge(r1_xxreal_0 \\ & (k3_stirl2_1\ X1\ X0)\ k6_numbers))\wedge(\neg(\neg r1_xxreal_0\ (k3_stirl2_1 \\ & X1\ X0)\ k6_numbers)\wedge(\neg(r1_xxreal_0\ np_1\ X0)\wedge(r1_xxreal_0\ X0 \\ & X1))\wedge(X0\neq X1)))) \end{aligned}$$