

t23_nat_3 (TM-
FJJ4RBEhzxwCkPD6X7bTzzQpRf6v8LdYf)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k11_nat_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k23_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_nat_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((r1_nat_d X1 X0) \Rightarrow ((r1_xxreal_0 X0 k6_numbers) \vee (r1_xxreal_0 X1 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0))))) \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((r1_nat_d X0 k6_numbers) \wedge (r1_nat_d np_1 X0)) \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k1_newton X0 np_1 = X0) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k1_newton X0 k6_numbers = np_1) \quad (6)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (8)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (10)$$

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.

$$k6_numbers = k1_xboole_0 \quad (13)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k23_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k11_nat_3 X0 X1 = k10_nat_3 X0 X1) \quad (16)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge (v1_xxreal_0 X0) \quad (17)$$

Assume the following.

$$\neg v1_finset_1 k4_ordinal1 \quad (18)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (19)$$

Assume the following.

$$v3_membered k1_numbers \quad (20)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (21)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 \\ X2 X0 X1)\Rightarrow(m1_subset_1 X2 X0)) \end{aligned} \quad (22)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(\\ m2_subset_1 (k23_binop_2 X0 X1) k1_numbers k5_numbers) \end{aligned} \quad (24)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(v7_ordinal1 X1)\Rightarrow(\neg \\ (X1\neq np_1)\wedge((X0\neq k6_numbers)\wedge(\neg\forall X2.(v7_ordinal1 X2)\Rightarrow \\ ((X2 = k10_nat_3 X0 X1)\Leftrightarrow((r1_nat_d (k1_newton X1 X2) X0)\wedge(\neg r1_nat_d \\ (k1_newton X1 (k23_binop_2 X2 np_1)) X0)))))) \end{aligned} \quad (25)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_xxreal_0 X0)\wedge(v2_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 \\ X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v3_xxreal_0 X0))) \end{aligned} \quad (26)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow((v7_ordinal1 X0)\wedge(\neg v3_xxreal_0 X0)) \quad (27)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (28)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_finset_1 X0) \quad (29)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v7_ordinal1\ X1)) \quad (30)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v1_xreal_0\ X1)) \quad (31)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\neg (X0\neq k6_numbers)\wedge((\neg r1_xreal_0\ X1\ X0)\wedge((X1\neq np_1)\wedge(k11_nat_3\ X0\ X1\neq k6_numbers))))))$$