

t3_nat_5

(TMX7oyQ28igMXfsRT6BFRsmHV6k5DzLr5Na)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $r1_int_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_6 : \iota$ be given. Let $np_1 : \iota$ be given. Let $np_3 : \iota$ be given. Let $np_5 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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. 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.

$$\forall X0.((v7_ordinal1 X0) \wedge (\neg v1_abian X0)) \Rightarrow (\neg(r1_xxreal_0 X0 np_6) \wedge ((X0 \neq np_1) \wedge ((X0 \neq np_3) \wedge (X0 \neq np_5)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (((r1_int_2 X0 X1) \wedge (X1 = k4_nat_d (k3_xcmplx_0 X2 X3) X0)) \Rightarrow ((r1_xxreal_0 X0 np_1) \vee (r1_int_2 X0 X3)))))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\neg(v1_abian\ (k3_xcmplx_0\ X0\ X1))\wedge((\neg v1_abian\ X0)\wedge(\neg v1_abian\ X1)))) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((r1_nat_d\ np_2\ X0)\Leftrightarrow(v1_abian\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((\neg v1_abian\ X0)\Leftrightarrow(k4_nat_d\ X0\ np_2 = np_1)) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v1_abian\ X0)\Leftrightarrow(k4_nat_d\ X0\ np_2 = k6_numbers)) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(r1_int_2\ X0\ (k1_nat_1\ X0\ np_1)) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow((r1_int_2\ X0\ X1)\Rightarrow((X0 = k1_xboole_0)\vee((X1 = k1_xboole_0)\vee(\forall X2.(v7_ordinal1\ X2)\Rightarrow(r1_int_2\ (k1_newton\ X0\ X2)\ X1)))))) \quad (11)$$

Assume the following.

$$\forall X0.((v7_ordinal1\ X0)\wedge(v1_abian\ X0))\Rightarrow((r1_xxreal_0\ X0\ np_1)\Rightarrow(X0 = k6_numbers)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1\ X0)\wedge(v1_int_1\ X1))\Rightarrow((r1_int_2\ X0\ X1)\Rightarrow(r1_int_2\ X1\ X0)) \quad (13)$$

Assume the following.

$$((v2_xxreal_0\ np_6)\wedge(m2_subset_1\ np_6\ k1_numbers\ k5_numbers))\wedge((m1_subset_1\ np_6\ k5_numbers)\wedge(m1_subset_1\ np_6\ k1_numbers)) \quad (14)$$

Assume the following.

$$((v2_xxreal_0\ np_2)\wedge(m2_subset_1\ np_2\ k1_numbers\ k5_numbers))\wedge((m1_subset_1\ np_2\ k5_numbers)\wedge(m1_subset_1\ np_2\ k1_numbers)) \quad (15)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (16)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (17)$$

Assume the following.

$$k3_xcmplx_0 \ np_2 \ np_1 = np_2 \quad (18)$$

Assume the following.

$$k2_xcmplx_0 \ np_1 \ np_1 = np_2 \quad (19)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (20)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v7_ordinal1 \\ & \ X1)) \Rightarrow (k2_newton \ X0 \ X1 = k1_newton \ X0 \ X1) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7_ordinal1 \ X0) \wedge (m1_subset_1 \ X1 \ k5_numbers)) \Rightarrow \\ & (k1_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} & \exists X0. (v1_xboole_0 \ X0) \wedge ((v1_xcmplx_0 \ X0) \wedge ((v1_xreal_0 \\ & \ X0) \wedge (v1_xreal_0 \ X0))) \end{aligned} \quad (24)$$

Assume the following.

$$v1_abian \ np_2 \quad (25)$$

Assume the following.

$$\neg v1_abian \ np_1 \quad (26)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7_ordinal1 \ X0) \wedge (v7_ordinal1 \ X1)) \Rightarrow (\\ & \ v7_ordinal1 \ (k3_xcmplx_0 \ X0 \ X1)) \end{aligned} \quad (27)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow ((r1_nat_d\ X0\ X1) \Leftrightarrow (\exists X2.(v7_ordinal1\ X2) \wedge (X1 = k3_xcmplx_0\ X0\ X2)))) \quad (28)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow ((r1_int_2\ X0\ X1) \Leftrightarrow (\forall X2.(v7_ordinal1\ X2) \Rightarrow (((r1_nat_d\ X2\ X0) \wedge (r1_nat_d\ X2\ X1)) \Rightarrow (X2 = np_1)))))) \quad (29)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \quad (30)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0) \Rightarrow (v7_ordinal1\ X0) \quad (31)$$

Assume the following.

$$\forall X0.((v1_xxreal_0\ X0) \wedge (v2_xxreal_0\ X0)) \Rightarrow ((\neg v1_xboole_0\ X0) \wedge ((v1_xxreal_0\ X0) \wedge (\neg v3_xxreal_0\ X0))) \quad (32)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow (v1_xcmplx_0\ X0) \quad (33)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v7_ordinal1\ X0) \wedge (\neg v3_xreal_0\ X0)) \quad (34)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xreal_0\ X0) \quad (35)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_int_1\ X0) \quad (36)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2.(v7_ordinal1\ X2) \Rightarrow ((X0 = k2_newton\ np_2\ X1) \Rightarrow ((v1_abian\ X2) \vee (r1_int_2\ X0\ X2))))))$$