

t59_nat_3

(TMMTVMYp7WBvCoAKai8u7ek4f23JFVsaCD9)

October 27, 2020

Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_nat_3 : \iota \Rightarrow \iota$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_nat_3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_xboole_0 : \iota$ be given. Let $r1_int_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v7_ordinal1\ X0) \wedge (v1_int_2\ X0)) \Rightarrow (\forall X1.((\neg v1_xboole_0\ X1) \wedge (v7_ordinal1\ X1)) \Rightarrow ((k11_nat_3\ X1\ X0 \neq k6_numbers) \Rightarrow (k1_seq_1\ (k13_nat_3\ X1)\ X0 = k1_newton\ X0\ (k11_nat_3\ X1\ X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow ((\neg r1_xxreal_0\ X0\ np_1) \Rightarrow (k11_nat_3\ (k1_newton\ X0\ X1)\ X0 = X1))) \quad (2)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (v7_ordinal1\ X1)) \Rightarrow (v7_ordinal1\ (k1_newton\ X0\ X1)) \quad (4)$$

Assume the following.

$$v1_xboole_0\ k1_xboole_0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1_xboole_0\ X0) \wedge (v7_ordinal1\ X0)) \wedge (v7_ordinal1\ X1)) \Rightarrow (\neg v1_xboole_0\ (k1_newton\ X0\ X1)) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v1_int_2\ X0) \Leftrightarrow ((\neg r1_xxreal_0\ X0\ np_1) \wedge (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\neg (r1_int_1\ X1\ X0) \wedge ((X1 \neq np_1) \wedge (X1 \neq X0)))))) \quad (7)$$

Assume the following.

$$\forall X0.((v7_ordinal1\ X0)\wedge(v1_int_2\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v7_ordinal1\ X0)\wedge(v1_int_2\ X0))) \quad (8)$$

Theorem 1

$$\forall X0.((v7_ordinal1\ X0)\wedge(v1_int_2\ X0))\Rightarrow(\forall X1.((\neg v1_xboole_0\ X1)\wedge(v7_ordinal1\ X1))\Rightarrow(k1_seq_1\ (k13_nat_3\ (k1_newton\ X0\ X1))\ X0 = k1_newton\ X0\ X1))$$