

t9_moebius1
(TMaxHyygduJ7w9bSFdms6jjV9pFbhxeJLQu)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_nat_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k10_nat_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_int_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow ((r1_xxreal_0 X1 X2) \Rightarrow (r1_nat_d (k1_newton X0 \\ & X1) (k1_newton X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (((r1_nat_d X0 X1) \wedge (r1_nat_d X1 X2)) \Rightarrow (r1_nat_d \\ & X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k11_nat_3 X0 X1 = k10_nat_3 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (v7_ordinal1 (k1_newton X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (v7_ordinal1 (k10_nat_3 X0 X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\neg \\ & (X1 \neq np_1) \wedge ((X0 \neq k6_numbers) \wedge (\neg \forall X2.(v7_ordinal1\ X2) \Rightarrow \\ & ((X2 = k10_nat_3\ X0\ X1) \Leftrightarrow ((r1_nat_d\ (k1_newton\ X1\ X2)\ X0) \wedge (\neg r1_nat_d \\ & (k1_newton\ X1\ (k23_binop_2\ X2\ np_1))\ X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow ((v1_int_2\ X0) \Leftrightarrow ((\neg r1_xxreal_0\ X0 \\ & np_1) \wedge (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\neg (r1_int_1\ X1\ X0) \wedge ((X1 \neq \\ & np_1) \wedge (X1 \neq X0)))))) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\ & ((v7_ordinal1\ X2) \wedge (v1_int_2\ X2)) \Rightarrow ((r1_xxreal_0\ X1\ (k11_nat_3 \\ & X0\ X2)) \Rightarrow ((X0 = k6_numbers) \vee (r1_nat_d\ (k1_newton\ X2\ X1)\ X0)))) \end{aligned}$$