

t6_nat_3 (TMLLvd-
SQCF7iGU4XJvFnWszCKMb6Vhc8Nxb)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_int_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & ((v7_ordinal1 X2) \wedge (v1_int_2 X2)) \Rightarrow ((r1_nat_d X2 (k1_newton X0 \\ & X1)) \Rightarrow (r1_nat_d X2 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\neg \\ & (v1_int_2 X0 X1) \wedge ((v1_int_2 X1) \wedge ((\neg r1_int_2 X0 X1) \wedge (X0 \neq X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (\\ & r1_nat_d X0 X0) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\\ & r1_int_2 X0 X1) \Leftrightarrow (\forall X2.((v7_ordinal1 X2) \wedge (v1_int_2 X2)) \Rightarrow \\ & (\neg(r1_nat_d X2 X0) \wedge (r1_nat_d X2 X1)))))) \end{aligned} \quad (4)$$

Theorem 1

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