

t56_newton

(TMb5w1o5JHo84QNbRhn6M839f3KeazBXh5N)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_int_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k6_nat_d X0 X1 = k3_int_2 X0 X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow (v7_ordinal1 (k3_int_2 X0 X1)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow ((X2 = k3_int_2 X0 X1) \Leftrightarrow ((r1_nat_d X2 X0) \wedge ((r1_nat_d \\ & \quad X2 X1) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow (((r1_nat_d X3 X0) \wedge (r1_nat_d \\ & \quad X3 X1)) \Rightarrow (r1_nat_d X3 X2)))))))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow ((r1_nat_d X0 X1) \Rightarrow (r1_nat_d (k6_nat_d X0 X2) \\ & \quad (k6_nat_d X1 X2)))) \end{aligned}$$