

t15_int_7

(TMTcK4nCWqJjfw4co7ymJqwyFkCj463qCRm)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_newton : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_valued_0 : \iota \Rightarrow o$ be given. Let $v2_pre_poly : \iota \Rightarrow o$ be given. Let $v1_int_7 : \iota \Rightarrow o$ be given. Let $k8_nat_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r8_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\neg r1_xxreal_0 (k2_newton np_2 X0) X0) \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v7_ordinal1 X1)) \Rightarrow (k2_newton X0 X1 = k1_newton X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(k13_newton X0 X1 = k1_newton X0 X1) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 k10_newton)\wedge((v1_funct_1 X1)\wedge((v1_partfun1 X1 k10_newton)\wedge((v4_valued_0 X1)\wedge(v2_pre_poly X1))))))\Rightarrow(\forall X2. \\ ((v1_relat_1 X2)\wedge((v4_relat_1 X2 k10_newton)\wedge((v1_funct_1 X2)\wedge \\ ((v1_partfun1 X2 k10_newton)\wedge((v4_valued_0 X2)\wedge(v2_pre_poly X2))))))\Rightarrow(((v1_int_7 X1)\wedge((v1_int_7 X2)\wedge((r1_xxreal_0 (k8_nat_3 \\ k10_newton X1) (k13_newton np_2 X0))\wedge(k8_nat_3 k10_newton X1 = \\ k8_nat_3 k10_newton X2))))\Rightarrow(r8_pboole k10_newton X1 X2))) \end{aligned} \quad (7)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge((v4_valued_0 X1)\wedge(v2_pre_poly X1))))))\Rightarrow(m2_subset_1 (k8_nat_3 X0 X1) k1_numbers k5_numbers) \quad (9)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(m1_subset_1 (k2_newton X0 X1) k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xxreal_0 X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k10_newton) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_partfun1 X0 k10_newton) \wedge ((v4_valued_0 X0) \wedge (v2_pre_poly \\ & X0)))))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k10_newton) \wedge \\ & ((v1_funct_1 X1) \wedge ((v1_partfun1 X1 k10_newton) \wedge ((v4_valued_0 \\ & X1) \wedge (v2_pre_poly X1)))))) \Rightarrow (((v1_int_7 X0) \wedge ((v1_int_7 X1) \wedge (\\ & k8_nat_3 k10_newton X0 = k8_nat_3 k10_newton X1))) \Rightarrow (r8_pboole \\ & k10_newton X0 X1))) \end{aligned}$$