

t40_real_3

(TMNxf3nkjtg9qXe9B4d2nBa23W7rpjTMWW)

October 27, 2020

Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_real_3 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k3_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ 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 $np_0 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_numbers : \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow ((\neg r1_xxreal_0 X1 X0) \Rightarrow (r1_xxreal_0 (k3_real_1 X0 np_1) X1))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0)))))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 np_1 X0) \Rightarrow (r1_xxreal_0 k6_numbers (k1_seq_1 (k4_real_3 X1) X0)))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (v3_xxreal_0 X1)) \Rightarrow (v3_xxreal_0 X0))) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$(m2_subset_1 \ np_0 \ k1_numbers \ k5_numbers) \wedge ((m1_subset_1 \ np_0 \ k5_numbers) \wedge (m1_subset_1 \ np_0 \ k1_numbers)) \quad (7)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (8)$$

Assume the following.

$$k2_xcmplx_0 \ np_0 \ np_1 = np_1 \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \ X0) \wedge (m1_subset_1 \ X1 \ k1_numbers)) \Rightarrow (k3_real_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v3_valued_0 \ X0))) \Rightarrow (k1_seq_1 \ X0 \ X1 = k1_funct_1 \ X0 \ X1) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 \ X0) \wedge ((v5_relat_1 \ X0 \ k4_numbers) \wedge (v1_funct_1 \ X0))) \Rightarrow (v1_int_1 \ (k1_funct_1 \ X0 \ X1)) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xreal_0 \ X0) \Rightarrow ((v5_relat_1 \ (k4_real_3 \ X0) \ k4_numbers) \wedge \\ & ((v1_funct_1 \ (k4_real_3 \ X0)) \wedge (v1_funct_2 \ (k4_real_3 \ X0) \ k5_numbers \\ & k1_numbers) \wedge (m1_subset_1 \ (k4_real_3 \ X0) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & k5_numbers \ k1_numbers)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v2_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X0))) \quad (18)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v5_relat_1 X0 k4_numbers)) \Rightarrow ((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \quad (19)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (v1_xreal_0 X0) \quad (20)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\neg v3_xxreal_0 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \quad (22)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (24)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 np_1 X0) \Rightarrow ((k1_seq_1 (k4_real_3 X1) X0 = k6_numbers) \vee (r1_xxreal_0 np_1 (k1_seq_1 (k4_real_3 X1) X0))))))$$