

t19_real.3 (TMWN- qeWCEe4cmNMXx9bWdT26QRc5CRkaspL)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k2_nat.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_nat.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_real.3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real.3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $k1_xboole.0 : \iota$ be given. Let $v1_xreal.0 : \iota \Rightarrow o$ be given. Let $r1_xxreal.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal.0 : \iota \Rightarrow o$ be given. Let $k3_nat.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_nat.d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_nat.d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xcmplx.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx.0 : \iota \Rightarrow o$ be given. Let $v1_xxreal.0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $v1_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_nat.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_seq.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v3_xxreal.0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole.0 X0) \Rightarrow (X0 = k1_xboole.0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal.0 X0) \Rightarrow (\forall X1.(v1_xreal.0 X1) \Rightarrow (\neg(r1_xxreal.0 X0 X1) \wedge ((\neg v2_xxreal.0 X1) \wedge (v2_xxreal.0 X0)))) \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xxreal.0 X0 k6_numbers) \Rightarrow (X1 = k2_nat.1 (k3_nat.1 X0 (k3_nat.d X1 X0)) (k4_nat.d X1 X0)))) \quad (3)$$

Assume the following.

$$v1_xboole.0 np_0 \quad (4)$$

Assume the following.

$$k6_numbers = k1_xboole.0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k4_nat_1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(k3_nat_1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (7)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge((v1_xcmplx_0 X0)\wedge((v1_xxreal_0 X0)\wedge(v1_xreal_0 X0))) \quad (8)$$

Assume the following.

$$v3_membered k1_numbers \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(m1_subset_1 (k3_nat_d X0 X1) k5_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow((v1_funct_1 (k2_real_3 X0 X1))\wedge((v1_funct_2 (k2_real_3 X0 X1) k5_numbers k5_numbers)\wedge(m1_subset_1 (k2_real_3 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k5_numbers)))))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow((v1_funct_1 (k1_real_3 X0 X1))\wedge((v1_funct_2 (k1_real_3 X0 X1) k5_numbers k5_numbers)\wedge(m1_subset_1 (k1_real_3 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k5_numbers)))))) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(v7_ordinal1 X1)\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 k5_numbers k5_numbers)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k5_numbers))))))\Rightarrow((X2 = k2_real_3 X0 X1)\Leftrightarrow((k3_funct_2 k5_numbers k5_numbers X2 k6_numbers = k3_nat_d X0 X1)\wedge((k3_funct_2 k5_numbers k5_numbers X2 np_1 = k3_nat_d X1 (k4_nat_d X0 X1))\wedge(\forall X3.(v7_ordinal1 X3)\Rightarrow(k3_funct_2 k5_numbers k5_numbers X2 (k1_nat_1 X3 np_2) = k3_nat_d (k1_seq_1 (k1_real_3 X0 X1) X3) (k3_funct_2 k5_numbers k5_numbers (k1_real_3 X0 X1) (k1_nat_1 X3 np_1)))))))) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\ & ((v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ k5_numbers\ k5_numbers) \wedge (m1_subset_1 \\ & X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k5_numbers)))))) \Rightarrow ((X2 = \\ & k1_real_3\ X0\ X1) \Leftrightarrow ((k3_funct_2\ k5_numbers\ k5_numbers\ X2\ k6_numbers = \\ & k4_nat_d\ X0\ X1) \wedge ((k3_funct_2\ k5_numbers\ k5_numbers\ X2\ np_1 = k4_nat_d \\ & X1\ (k4_nat_d\ X0\ X1)) \wedge (\forall X3.(v7_ordinal1\ X3) \Rightarrow (k3_funct_2 \\ & k5_numbers\ k5_numbers\ X2\ (k1_nat_1\ X3\ np_2) = k4_nat_d\ (k1_seq_1 \\ & X2\ X3)\ (k3_funct_2\ k5_numbers\ k5_numbers\ X2\ (k1_nat_1\ X3\ np_1)))))))))) \\ & \hspace{15em} (15) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0\ X0) \wedge (v1_xcmplx_0\ X1)) \Rightarrow (k3_xcmplx_0\ X0\ X1 = k3_xcmplx_0\ X1\ X0) \quad (16)$$

Assume the following.

$$\forall X0.(v3_membered\ X0) \Rightarrow (v1_membered\ X0) \quad (17)$$

Assume the following.

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

Assume the following.

$$\forall X0.((v1_xxreal_0\ X0) \wedge (v2_xxreal_0\ X0)) \Rightarrow ((\neg v1_xboole_0\ X0) \wedge ((v1_xxreal_0\ X0) \wedge (\neg v3_xxreal_0\ X0))) \quad (19)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow (v1_xcmplx_0\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v7_ordinal1\ X0) \wedge (\neg v3_xxreal_0\ X0)) \quad (21)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xxreal_0\ X0) \quad (22)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xreal_0\ X0) \quad (23)$$

Assume the following.

$$\forall X0.(v1_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0)) \Rightarrow (v1_membered\ X1)) \quad (24)$$

Assume the following.

$$\forall X0.(v1_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v1_xcmplx_0\ X1)) \quad (25)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow((X0\neq k6_numbers)\Rightarrow(X1 = k2_nat_1\ (k4_nat_1\ (k3_funct_2\ k5_numbers\ k5_numbers\ (k2_real_3\ X1\ X0)\ k6_numbers)\ X0)\ (k3_funct_2\ k5_numbers\ k5_numbers\ (k1_real_3\ X1\ X0)\ k6_numbers))))))$$