

l32_real_3

(TMSm9P74iPGF7Nqs8xRcLEHdpTkLAT8mkMf)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ 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 $np_0 : \iota$ 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 $v6_membered : \iota \Rightarrow o$ be given. Let $v4_valued_0 : \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k2_xcmplx_0 \\ & X0 X2) (k2_xcmplx_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$m1_subset_1 \ k1_xboole_0 \ k4_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 \ k6_numbers = X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\neg(\neg r1_xxreal_0 \\ & X1 X0) \wedge ((r1_xxreal_0 (k1_seq_1 (k1_real_3 X2 X3) X0) (k1_seq_1 \\ & (k1_real_3 X2 X3) X1)) \wedge (k1_seq_1 (k1_real_3 X2 X3) X0 \neq k6_numbers))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$(m2_subset_1\ np_0\ k1_numbers\ k5_numbers) \wedge ((m1_subset_1\ np_0\ k5_numbers) \wedge (m1_subset_1\ np_0\ k1_numbers)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0 : \iota \Rightarrow o. & ((\exists X1. (v7_ordinal1\ X1) \wedge (X0\ X1)) \wedge \\ & (\forall X1. (v7_ordinal1\ X1) \Rightarrow (\neg (X1 \neq k6_numbers) \wedge ((X0\ X1) \wedge (\forall X2. \\ & (v7_ordinal1\ X2) \Rightarrow (\neg (\neg r1_xreal_0\ X1\ X2) \wedge (X0\ X2))))))) \Rightarrow (X0\ k6_numbers) \end{aligned} \quad (7)$$

Assume the following.

$$k2_xcmplx_0\ np_1\ np_0 = np_1 \quad (8)$$

Assume the following.

$$\neg r1_xreal_0\ np_1\ np_0 \quad (9)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v3_valued_0\ X0))) \Rightarrow (k1_seq_1\ X0\ X1 = k1_funct_1\ X0\ X1) \quad (12)$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v4_valued_0\ X0))) \Rightarrow (v7_ordinal1\ (k1_funct_1\ X0\ X1)) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. ((v7_ordinal1\ X0) \wedge (v7_ordinal1\ X1)) \Rightarrow (v7_ordinal1\ (k2_xcmplx_0\ X0\ X1)) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. & ((v7_ordinal1\ X0) \wedge (v7_ordinal1\ X1)) \Rightarrow (\\ & (v1_funct_1\ (k1_real_3\ X0\ X1)) \wedge ((v1_funct_2\ (k1_real_3\ X0\ X1) \\ & k5_numbers\ k5_numbers) \wedge (m1_subset_1\ (k1_real_3\ X0\ X1)\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k5_numbers\ k5_numbers)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \quad (17)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v4_valued_0 X0))\Rightarrow((v1_relat_1 X0)\wedge(v3_valued_0 X0)) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (19)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xreal_0 X0) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(v6_membered X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v4_valued_0 X2)) \quad (22)$$

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

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(v7_ordinal1 X1)\Rightarrow(\exists X2.(v7_ordinal1 X2)\wedge(k1_seq_1 (k1_real_3 X0 X1) X2 = k6_numbers)))$$