

t78_integra8
(TMYpVRetr41PxSNuRjFrFi4KKA1sLo42y1k)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_measure5 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k2_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k47_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_rcomp_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_integra5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_subset_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r2_fdiff_1 k16_sin_cos k1_numbers) \wedge (k1_fdiff_1 k16_sin_cos X0 = k1_seq_1 k19_sin_cos X0)) \quad (1)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad k1_numbers k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 \\
& \quad X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X2. \\
& ((\neg v1_xboole_0 X2) \wedge ((v2_measure5 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& \quad k1_numbers)))) \Rightarrow (\forall X3.((v3_rcomp_1 X3) \wedge (m1_subset_1 X3 \\
& \quad (k1_zfmisc_1 k1_numbers)))) \Rightarrow (((r2_fdiff_1 X0 X3) \wedge ((r2_fdiff_1 \\
& \quad X1 X3) \wedge ((r1_tarski X2 X3) \wedge ((r1_integra5 X2 (k2_fdiff_1 X0 X3) \wedge \\
& \quad ((v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers (k2_fdiff_1 \\
& \quad X0 X3) X2)) \wedge ((r1_integra5 X2 (k2_fdiff_1 X1 X3) \wedge (v1_comseq_2 \\
& \quad (k2_partfun1 k1_numbers k1_numbers (k2_fdiff_1 X1 X3) X2)))))) \Rightarrow \\
& \quad (k2_integra5 X2 (k47_valued_1 k1_numbers k1_numbers k1_numbers \\
& \quad (k2_fdiff_1 X0 X3) (k2_fdiff_1 X1 X3)) = k9_real_1 (k9_real_1 (k1_seq_1 \\
& \quad X0 (k4_seq_4 X2)) (k1_seq_1 X0 (k5_seq_4 X2))) (k9_real_1 (k1_seq_1 \\
& \quad X1 (k4_seq_4 X2)) (k1_seq_1 X1 (k5_seq_4 X2))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \tag{3}$$

Assume the following.

$$\begin{aligned}
& k2_fdiff_1 (k32_valued_1 k1_numbers k1_numbers k19_sin_cos) \\
& \quad k1_numbers = k16_sin_cos
\end{aligned} \tag{4}$$

Assume the following.

$$k2_fdiff_1 k16_sin_cos k1_numbers = k19_sin_cos \tag{5}$$

Assume the following.

$$\begin{aligned}
& (r2_fdiff_1 (k32_valued_1 k1_numbers k1_numbers k19_sin_cos) \\
& k1_numbers) \wedge (\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow ((X0 \in k1_numbers) \Rightarrow \\
& \quad (k1_fdiff_1 (k32_valued_1 k1_numbers k1_numbers k19_sin_cos) \\
& \quad X0 = k3_funct_2 k1_numbers k1_numbers k16_sin_cos X0)))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\
& (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0)) \Rightarrow (k3_funct_2 X0 \\
& \quad X1 X2 X3 = k1_funct_1 X2 X3)
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((v3_membered X1) \wedge ((v1_funct_1 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k32_valued_1 \\
& \quad X0 X1 X2 = k30_valued_1 X2)
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (9)$$

Assume the following.

$$\exists X0.(m1_subset_1 X0 k1_numbers)\wedge((v1_xxreal_0 X0)\wedge((v1_xcmplx_0 X0)\wedge((v1_xreal_0 X0)\wedge(v1_int_1 X0)))) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((v2_measure5 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))))\Rightarrow((r1_integra5 X0 k16_sin_cos)\wedge(v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers k16_sin_cos X0))) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((v2_measure5 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))))\Rightarrow((r1_integra5 X0 k19_sin_cos)\wedge(v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers k19_sin_cos X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge(v3_membered X1))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((v1_funct_1 (k30_valued_1 X2))\wedge(v1_partfun1 (k30_valued_1 X2) X0)) \quad (13)$$

Assume the following.

$$v3_membered k1_numbers \quad (14)$$

Assume the following.

$$v3_rcomp_1 (k2_subset_1 k1_numbers) \quad (15)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(m1_subset_1 (k5_seq_4 X0) k1_numbers) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(m1_subset_1 (k4_seq_4 X0) k1_numbers) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3_membered\ X1)\wedge((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))\Rightarrow((v1_funct_1\ (k32_valued_1\ X0\ X1\ X2))\wedge(m1_subset_1\ (k32_valued_1\ X0\ X1\ X2)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))))) \quad (19)$$

Assume the following.

$$\forall X0.m1_subset_1\ (k2_subset_1\ X0)\ (k1_zfmisc_1\ X0) \quad (20)$$

Assume the following.

$$(v1_funct_1\ k19_sin_cos)\wedge((v1_funct_2\ k19_sin_cos\ k1_numbers\ k1_numbers)\wedge(m1_subset_1\ k19_sin_cos\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \quad (21)$$

Assume the following.

$$(v1_funct_1\ k16_sin_cos)\wedge((v1_funct_2\ k16_sin_cos\ k1_numbers\ k1_numbers)\wedge(m1_subset_1\ k16_sin_cos\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \quad (22)$$

Assume the following.

$$\forall X0.k2_subset_1\ X0 = X0 \quad (23)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v1_partfun1\ X2\ X0)\Rightarrow(v1_funct_2\ X2\ X0\ X1)) \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered\ X1)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v3_valued_0\ X2)) \quad (26)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0\ X0)\wedge((v2_measure5\ X0)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers))))\Rightarrow(k2_integra5\ X0\ (k47_valued_1\ k1_numbers\ k1_numbers\ k1_numbers\ k16_sin_cos\ k19_sin_cos) = k9_real_1\ (k9_real_1\ (k3_funct_2\ k1_numbers\ k1_numbers\ (k32_valued_1\ k1_numbers\ k1_numbers\ k19_sin_cos)\ (k4_seq_4\ X0))\ (k3_funct_2\ k1_numbers\ k1_numbers\ (k32_valued_1\ k1_numbers\ k1_numbers\ k19_sin_cos)\ (k5_seq_4\ X0))\ (k9_real_1\ (k3_funct_2\ k1_numbers\ k1_numbers\ k16_sin_cos\ (k4_seq_4\ X0))\ (k3_funct_2\ k1_numbers\ k1_numbers\ k16_sin_cos\ (k5_seq_4\ X0))))$$