

t91_integra8

(TMKA_{v5pFz}M1HjLvQqbkEQVNpYfdjFERCFW_y)

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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 $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $np_1 : \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\
& X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (k2_integra5 X0 (k20_valued_1 \\
& k1_numbers k1_numbers k1_numbers k16_sin_cos k19_sin_cos) = k8_real_1 \\
& (k10_real_1 np_1 np_2) (k9_real_1 (k8_real_1 (k3_funct_2 k1_numbers \\
& k1_numbers k19_sin_cos (k5_seq_4 X0)) (k3_funct_2 k1_numbers \\
& k1_numbers k19_sin_cos (k5_seq_4 X0))) (k8_real_1 (k3_funct_2 \\
& k1_numbers k1_numbers k19_sin_cos (k4_seq_4 X0)) (k3_funct_2 \\
& k1_numbers k1_numbers k19_sin_cos (k4_seq_4 X0))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xreal_0 X0) \Rightarrow ((k1_seq_1 k16_sin_cos (k3_real_1 \\
& X0 (k8_real_1 np_2 k32_sin_cos)) = k1_seq_1 k16_sin_cos X0) \wedge (\\
& (k1_seq_1 k19_sin_cos (k3_real_1 X0 (k8_real_1 np_2 k32_sin_cos)) = \\
& k1_seq_1 k19_sin_cos X0) \wedge ((k1_seq_1 k16_sin_cos (k9_real_1 (\\
& k10_real_1 k32_sin_cos np_2) X0) = k1_seq_1 k19_sin_cos X0) \wedge (\\
& (k1_seq_1 k19_sin_cos (k9_real_1 (k10_real_1 k32_sin_cos np_2) \\
& X0) = k1_seq_1 k16_sin_cos X0) \wedge ((k1_seq_1 k16_sin_cos (k7_real_1 \\
& (k10_real_1 k32_sin_cos np_2) X0) = k1_seq_1 k19_sin_cos X0) \wedge \\
& ((k1_seq_1 k19_sin_cos (k7_real_1 (k10_real_1 k32_sin_cos np_2) \\
& X0) = k1_real_1 (k1_seq_1 k16_sin_cos X0)) \wedge ((k1_seq_1 k16_sin_cos \\
& (k7_real_1 k32_sin_cos X0) = k1_real_1 (k1_seq_1 k16_sin_cos X0)) \wedge \\
& (k1_seq_1 k19_sin_cos (k7_real_1 k32_sin_cos X0) = k1_real_1 (\\
& k1_seq_1 k19_sin_cos X0)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& (k1_seq_1 k19_sin_cos (k10_real_1 k32_sin_cos np_2) = k6_numbers) \wedge \\
& ((k1_seq_1 k16_sin_cos (k10_real_1 k32_sin_cos np_2) = np_1) \wedge \\
& ((k1_seq_1 k19_sin_cos k32_sin_cos = k1_real_1 np_1) \wedge ((k1_seq_1 \\
& k16_sin_cos k32_sin_cos = k6_numbers) \wedge ((k1_seq_1 k19_sin_cos \\
& (k7_real_1 k32_sin_cos (k10_real_1 k32_sin_cos np_2)) = k6_numbers) \wedge \\
& ((k1_seq_1 k16_sin_cos (k7_real_1 k32_sin_cos (k10_real_1 k32_sin_cos \\
& np_2)) = k1_real_1 np_1) \wedge ((k1_seq_1 k19_sin_cos (k8_real_1 \\
& np_2 k32_sin_cos) = np_1) \wedge (k1_seq_1 k16_sin_cos (k8_real_1 \\
& np_2 k32_sin_cos) = k6_numbers)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{4}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k6_xcmplx_0 X0 k6_numbers = X0) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v2_measure5 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k1_numbers)))) \Rightarrow ((X2 = k1_rcomp_1 \\
& X0 X1) \Rightarrow ((k4_seq_4 X2 = X1) \wedge (k5_seq_4 X2 = X0))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$(m2_subset_1 \ np_0 \ k1_numbers \ k5_numbers) \wedge ((m1_subset_1 \ np_0 \ k5_numbers) \wedge (m1_subset_1 \ np_0 \ k1_numbers)) \quad (9)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (10)$$

Assume the following.

$$k4_xcmplx_0 \ (k7_xcmplx_0 \ (k4_xcmplx_0 \ np_1) \ np_2) = k7_xcmplx_0 \ np_1 \ np_2 \quad (11)$$

Assume the following.

$$k4_xcmplx_0 \ (k7_xcmplx_0 \ np_1 \ np_2) = k7_xcmplx_0 \ (k4_xcmplx_0 \ np_1) \ np_2 \quad (12)$$

Assume the following.

$$k3_xcmplx_0 \ (k7_xcmplx_0 \ np_1 \ np_2) \ np_1 = k7_xcmplx_0 \ np_1 \ np_2 \quad (13)$$

Assume the following.

$$k3_xcmplx_0 \ np_1 \ np_1 = np_1 \quad (14)$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_0 = np_0 \quad (15)$$

Assume the following.

$$k7_xcmplx_0 \ np_1 \ (k4_xcmplx_0 \ np_2) = k7_xcmplx_0 \ (k4_xcmplx_0 \ np_1) \ np_2 \quad (16)$$

Assume the following.

$$k6_xcmplx_0 \ np_1 \ np_0 = np_1 \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k9_real_1 \ X0 \ X1 = k6_xcmplx_0 \ X0 \ X1) \quad (18)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k8_real_1 \ X0 \ X1 = k3_xcmplx_0 \ X0 \ X1) \quad (19)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (22)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 X0 = k4_xcmplx_0 X0) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k10_real_1 X0 X1 = k7_xcmplx_0 X0 X1) \quad (24)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (25)$$

Assume the following.

$$v3_membered k1_numbers \quad (26)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (27)$$

Assume the following.

$$m1_subset_1 k32_sin_cos k1_numbers \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (m1_subset_1 (k1_seq_1 X0 X1) k1_numbers) \quad (29)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (m1_subset_1 (k1_real_1 X0) k1_numbers) \quad (30)$$

Assume the following.

$$(v1_funct_1 \ k19_sin_cos) \wedge ((v1_funct_2 \ k19_sin_cos \ k1_numbers \ k1_numbers) \wedge (m1_subset_1 \ k19_sin_cos \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers)))) \quad (31)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (m1_subset_1 \ (k10_real_1 \ X0 \ X1) \ k1_numbers) \quad (32)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow (v1_xcmplx_0 \ X0) \quad (33)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xreal_0 \ X0) \quad (34)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (35)$$

Assume the following.

$$\forall X0. \forall X1. (v3_membered \ X1) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v3_valued_0 \ X2)) \quad (36)$$

Assume the following.

$$\forall X0. (v3_membered \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ X0) \Rightarrow (v1_xreal_0 \ X1)) \quad (37)$$

Theorem 1

$$\forall X0. ((\neg v1_xboole_0 \ X0) \wedge ((v2_measure5 \ X0) \wedge (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ k1_numbers)))) \Rightarrow ((X0 = k1_rcomp_1 \ k6_numbers \ (k10_real_1 \ k32_sin_cos \ np_2)) \Rightarrow (k2_integra5 \ X0 \ (k20_valued_1 \ k1_numbers \ k1_numbers \ k1_numbers \ k16_sin_cos \ k19_sin_cos) = k10_real_1 \ np_1 \ np_2))$$