

t58_integra8

(TMcjDyTq7JPEYG1fsPvxkVD8wjnjhs7mBw8)

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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 $np_1 : \iota$ be given. Let $k2_intgra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_sin_cos2 : \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k8_power : \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_sin_cos2 : \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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 $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (k2_intgra5 X0 k4_sin_cos2 = \\ & k9_real_1 (k3_funct_2 k1_numbers k1_numbers k1_sin_cos2 (k4_seq_4 \\ & X0)) (k3_funct_2 k1_numbers k1_numbers k1_sin_cos2 (k5_seq_4 \\ & X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k6_xcmplx_0 X0 k6_numbers = X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v2_measure5 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k1_numbers)))) \Rightarrow ((X2 = k1_rcomp_1 \\ & X0 X1) \Rightarrow ((k4_seq_4 X2 = X1) \wedge (k5_seq_4 X2 = X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & k3_funct_2 k1_numbers k1_numbers k1_sin_cos2 np_1 = k10_real_1 \\ & (k9_real_1 (k5_square_1 k8_power) np_1) (k8_real_1 np_2 k8_power) \end{aligned} \quad (5)$$

Assume the following.

$$k1_seq_1 k1_sin_cos2 k6_numbers = k6_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 \\ & X1)) \Rightarrow (k9_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 \\ & X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 \\ & X0))) \Rightarrow (v1_xcmplx_0 (k1_funct_1 X0 X1)) \end{aligned} \quad (12)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (13)$$

Assume the following.

$$(v1_funct_1\ k1_sin_cos2) \wedge ((v1_funct_2\ k1_sin_cos2\ k1_numbers\ k1_numbers) \wedge (m1_subset_1\ k1_sin_cos2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v3_valued_0\ X0))) \Rightarrow (m1_subset_1\ (k1_seq_1\ X0\ X1)\ k1_numbers) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers)) \Rightarrow (v3_membered\ X0) \quad (16)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge (v3_valued_0\ X0)) \Rightarrow ((v1_relat_1\ X0) \wedge (v1_valued_0\ X0)) \quad (17)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge (v5_relat_1\ X0\ k1_numbers)) \Rightarrow ((v1_relat_1\ X0) \wedge (v3_valued_0\ X0)) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \Rightarrow ((v4_relat_1\ X2\ X0) \wedge (v5_relat_1\ X2\ X1)) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \Rightarrow (v1_relat_1\ X2) \quad (20)$$

Assume the following.

$$\forall X0.(v3_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v1_xreal_0\ X1)) \quad (21)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0\ X0) \wedge ((v2_measure5\ X0) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers)))) \Rightarrow ((X0 = k1_rcomp_1\ k6_numbers\ np_1) \Rightarrow (k2_integra5\ X0\ k4_sin_cos2 = k10_real_1\ (k9_real_1\ (k5_square_1\ k8_power)\ np_1)\ (k8_real_1\ np_2\ k8_power)))$$