

t39_integra8

(TMQj5TiaNCsKiG3weQVc7TtogVKRPf2Gq14)

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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 $k19_sin_cos : \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_sin_cos : \iota$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_integra5 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ 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.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$(k1_relset_1 k1_numbers k16_sin_cos = k1_numbers) \wedge (k1_relset_1 k1_numbers k19_sin_cos = k1_numbers) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1. \forall X2. ((v1_funct_1 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & \quad (((r1_tarski X0 X1) \wedge (r2_fdiff_1 X2 X1) \wedge (r1_integra5 X0 (k2_fdiff_1 \\ & \quad X2 X1)) \wedge (v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers (k2_fdiff_1 \\ & \quad X2 X1) X0)))) \Rightarrow (k2_integra5 X0 (k2_fdiff_1 X2 X1) = k9_real_1 (k1_seq_1 \\ & \quad X2 (k4_seq_4 X0) (k1_seq_1 X2 (k5_seq_4 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & \quad (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 X0 X1)))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & \quad X1 X2 X3 = k1_funct_1 X2 X3)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (6)$$

Assume the following.

$$\exists X0. (m1_subset_1 X0 k1_numbers) \wedge ((v1_xxreal_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xreal_0 X0) \wedge (v1_int_1 X0)))) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow ((r1_integra5 X0 k19_sin_cos) \wedge \\ & \quad (v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers k19_sin_cos \\ & \quad X0))) \end{aligned} \quad (8)$$

Assume the following.

$$v3_membered k1_numbers \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (10)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (m1_subset_1 (k5_seq_4 X0) k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (m1_subset_1 (k4_seq_4 X0) k1_numbers) \quad (12)$$

Assume the following.

$$(v1_funct_1\ k19_sin_cos) \wedge ((v1_funct_2\ k19_sin_cos\ k1_numbers\ k1_numbers) \wedge (m1_subset_1\ k19_sin_cos\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \quad (13)$$

Assume the following.

$$(v1_funct_1\ k16_sin_cos) \wedge ((v1_funct_2\ k16_sin_cos\ k1_numbers\ k1_numbers) \wedge (m1_subset_1\ k16_sin_cos\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1\ X0) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \Rightarrow (\forall X1.(r2_fdiff_1\ X0\ X1) \Rightarrow (\forall X2. \\ & ((v1_funct_1\ X2) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \Rightarrow ((X2 = k2_fdiff_1\ X0\ X1) \Leftrightarrow ((k1_rerset_1\ k1_numbers\ X2 = X1) \wedge (\forall X3.(m1_subset_1\ X3\ k1_numbers) \Rightarrow ((X3 \in X1) \Rightarrow (k1_seq_1\ X2\ X3 = k1_fdiff_1\ X0\ X3))))) \quad (15) \end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \Rightarrow (v1_relat_1\ X2) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered\ X1) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \Rightarrow (v3_valued_0\ X2)) \quad (18)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0\ X0) \wedge ((v2_measure5\ X0) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers)))) \Rightarrow (k2_intgra5\ X0\ k19_sin_cos = k9_real_1\ (k3_funct_2\ k1_numbers\ k1_numbers\ k16_sin_cos\ (k4_seq_4\ X0))\ (k3_funct_2\ k1_numbers\ k1_numbers\ k16_sin_cos\ (k5_seq_4\ X0)))$$