

l50_integra8

(TMNmKq4YwV7nk5q9ne8xrfDdnSSh63Gm4xn)

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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 $r1_intgra5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k19_sin_cos : \iota$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_fcont_1 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & (((r1_tarski X0 (k1_relset_1 k1_numbers X1)) \wedge (v1_fcont_1 (k2_partfun1 \\ & \quad k1_numbers k1_numbers X1 X0))) \Rightarrow (r1_intgra5 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & (((r1_tarski X0 (k1_relset_1 k1_numbers X1)) \wedge (v1_fcont_1 (k2_partfun1 \\ & \quad k1_numbers k1_numbers X1 X0))) \Rightarrow (v1_comseq_2 (k2_partfun1 k1_numbers \\ & \quad k1_numbers X1 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 \\ & \quad X0 X1 X2 X3 = k5_relat_1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (5)$$

Assume the following.

$$k9_xtuple_0 k19_sin_cos = k1_numbers \quad (6)$$

Assume the following.

$$(v1_funct_1 k19_sin_cos)\wedge((v1_funct_2 k19_sin_cos k1_numbers k1_numbers)\wedge(v1_fcont_1 k19_sin_cos)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_funct_1 X0)\wedge((v1_fcont_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))))\Rightarrow((v1_funct_1 (k5_relat_1 X0 X1))\wedge(v1_fcont_1 (k5_relat_1 X0 X1))) \quad (8)$$

Assume the following.

$$(v1_funct_1 k19_sin_cos)\wedge((v1_funct_2 k19_sin_cos k1_numbers k1_numbers)\wedge(m1_subset_1 k19_sin_cos (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (11)$$

Theorem 1

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