

t29_integra8
(TMc3VxcGmK9ZSEFynr6teGuMfNuWJggttCHG)

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Let $k2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $r2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & (r2_fdiff_1 (k32_valued_1 k1_numbers k1_numbers k19_sin_cos) \\ & k1_numbers) \wedge (\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow ((X0 \in k1_numbers) \Rightarrow \\ & (k1_fdiff_1 (k32_valued_1 k1_numbers k1_numbers k19_sin_cos) \\ & X0 = k3_funct_2 k1_numbers k1_numbers k16_sin_cos X0))) \end{aligned} \quad (1)$$

Assume the following.

$$(k1_relset_1 k1_numbers k16_sin_cos = k1_numbers) \wedge (k1_relset_1 k1_numbers k19_sin_cos = k1_numbers) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (4)$$

Assume the following.

$$v3_membered k1_numbers \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v3_membered \ X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))))))\Rightarrow((v1_funct_1 \\ & (k32_valued_1 \ X0 \ X1 \ X2))\wedge(m1_subset_1 \ (k32_valued_1 \ X0 \ X1 \ X2) \ (\\ & k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ k1_numbers)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 \ k19_sin_cos)\wedge((v1_funct_2 \ k19_sin_cos \ k1_numbers \\ & k1_numbers)\wedge(m1_subset_1 \ k19_sin_cos \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 \ k16_sin_cos)\wedge((v1_funct_2 \ k16_sin_cos \ k1_numbers \\ & k1_numbers)\wedge(m1_subset_1 \ k16_sin_cos \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 \ X0)\wedge(m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers))))\Rightarrow(\forall X1.(r2_fdiff_1 \ X0 \ X1)\Rightarrow(\forall X2. \\ & ((v1_funct_1 \ X2)\wedge(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers))))\Rightarrow((X2 = k2_fdiff_1 \ X0 \ X1)\Leftrightarrow((k1_relset_1 \ k1_numbers \\ & X2 = X1)\wedge(\forall X3.(m1_subset_1 \ X3 \ k1_numbers)\Rightarrow((X3 \in X1)\Rightarrow(k1_seq_1 \\ & X2 \ X3 = k1_fdiff_1 \ X0 \ X3)))))) \end{aligned} \quad (10)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(v3_membered \ X1)\Rightarrow(\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1)))\Rightarrow(v3_valued_0 \ X2)) \quad (12)$$

Theorem 1

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