

t9_rvsum_1 (TMMV_mDv_kBfvEUwjAYYX- PXFcFZ4LPYMETiS7)

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Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_finseqop : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k33_binop_2 : \iota$ be given. Let $k31_binop_2 : \iota$ be given. Let $r1_finseqop : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_binop_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_binop_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_setwiseo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finseqop : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$r1_finseqop \ k1_numbers \ k31_binop_2 \ k33_binop_2 \tag{1}$$

Assume the following.

$$(v1_funct_1 \ k33_binop_2) \wedge ((v1_funct_2 \ k33_binop_2 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers) \wedge ((v1_binop_1 \ k33_binop_2 \ k1_numbers) \wedge (v2_binop_1 \ k33_binop_2 \ k1_numbers))) \tag{2}$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \tag{3}$$

Assume the following.

$$(v1_funct_1 \ k33_binop_2) \wedge ((v1_funct_2 \ k33_binop_2 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers) \wedge (v1_setwiseo \ k33_binop_2 \ k1_numbers)) \tag{4}$$

Assume the following.

$$(v1_funct_1 \ k33_binop_2) \wedge ((v1_funct_2 \ k33_binop_2 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers) \wedge (m1_subset_1 \ k33_binop_2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers)))) \tag{5}$$

Assume the following.

$$(v1_funct_1 \ k31_binop_2) \wedge ((v1_funct_2 \ k31_binop_2 \ k1_numbers \ k1_numbers) \wedge (m1_subset_1 \ k31_binop_2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers)))) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\
& X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow \\
& (\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 \\
& X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((r2_funct_2 X0 X1 X2 X3)\Leftrightarrow \\
& (\forall X4.(m1_subset_1 X4 X0)\Rightarrow(k1_funct_1 X2 X4 = k1_funct_1 \\
& X3 X4))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge(\\
& (v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0))))\Rightarrow(((v1_setwiseo X1 X0)\wedge \\
& ((v2_binop_1 X1 X0)\wedge(v1_finseqop X1 X0)))\Rightarrow(\forall X2.((v1_funct_1 \\
& X2)\wedge((v1_funct_2 X2 X0 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X0))))\Rightarrow((X2 = k5_finseqop X0 X1)\Leftrightarrow(r1_finseqop X0 X2 X1))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge(\\
& (v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0))))\Rightarrow((v1_finseqop X1 X0)\Leftrightarrow \\
& (\exists X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X0)\wedge(m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\wedge(r1_finseqop X0 X2 X1))))
\end{aligned} \tag{9}$$

Theorem 1

$$\begin{aligned}
& r2_funct_2 k1_numbers k1_numbers (k5_finseqop k1_numbers k33_binop_2) \\
& k31_binop_2
\end{aligned}$$