

t9_pdiff_1

(TMdjeF8D9Zzud8uXv2Af5Hjtg1gjPZ7feqf)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k2_pdiff_1 : \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_ndiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ 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 $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k1_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (u1_struct_0 (k4_real_ns1 np_1)) (u1_struct_0 (k4_real_ns1 \\
& \quad np_1)))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X2.(m1_subset_1 \\
& \quad X2 (u1_struct_0 (k4_real_ns1 np_1))) \Rightarrow (\forall X3.(m1_subset_1 \\
& \quad X3 k1_numbers) \Rightarrow (((X0 = k2_pdiff_1 X1) \wedge ((X2 = k12_finseq_1 k1_numbers \\
& \quad X3) \wedge (r1_fdiff_1 X1 X3)) \Rightarrow ((r1_ndiff_1 (k4_real_ns1 np_1) (k4_real_ns1 \\
& \quad np_1) X0 X2) \wedge (k1_funct_1 (k3_ndiff_1 (k4_real_ns1 np_1) (k4_real_ns1 \\
& \quad np_1) X0 X2) (k12_finseq_1 k5_numbers np_1) = k12_finseq_1 k1_numbers \\
& \quad (k1_fdiff_1 X1 X3)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (u1_struct_0 (k4_real_ns1 np_1)) (u1_struct_0 (k4_real_ns1 \\
& \quad np_1)))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X2.(m1_subset_1 \\
& \quad X2 (u1_struct_0 (k4_real_ns1 np_1))) \Rightarrow (\forall X3.(m1_subset_1 \\
& \quad X3 k1_numbers) \Rightarrow (((X0 = k2_pdiff_1 X1) \wedge ((X2 = k12_finseq_1 k1_numbers \\
& \quad X3) \wedge (r1_ndiff_1 (k4_real_ns1 np_1) (k4_real_ns1 np_1) X0 X2))) \Rightarrow \\
& ((r1_fdiff_1 X1 X3) \wedge (k1_fdiff_1 X1 X3 = k1_seq_1 (k3_relat_1 (k2_funct_1 \\
& \quad (k1_pdiff_1 np_1 np_1)) (k3_relat_1 (k3_ndiff_1 (k4_real_ns1 \\
& \quad np_1) (k4_real_ns1 np_1) X0 X2) (k1_pdiff_1 np_1 np_1))) np_1))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad (u1_struct_0 (k4_real_ns1 np_1)) (u1_struct_0 (k4_real_ns1 \\ & \quad np_1)))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X2.(m1_subset_1 \\ & \quad X2 (u1_struct_0 (k4_real_ns1 np_1))) \Rightarrow (\forall X3.(m1_subset_1 \\ X3 k1_numbers) \Rightarrow ((X0 = k2_pdiff_1 X1) \wedge (X2 = k12_finseq_1 k1_numbers \\ & \quad X3) \Rightarrow ((r1_ndiff_1 (k4_real_ns1 np_1) (k4_real_ns1 np_1) X0 \\ & \quad X2) \Leftrightarrow (r1_fdiff_1 X1 X3)))))) \end{aligned}$$