

t6_pdiff_4

(TMa3bHru4CeWFrik8kgRGboCdRrRjz3dn2V)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_pdiff_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & (k1_relset_1 (k1_euclid\ np_3) (k1_pdiff_1\ np_3\ np_3) = k1_euclid \\
 & \quad np_3) \wedge ((k1_rvsum_1 (k1_pdiff_1\ np_3\ np_3) = k1_numbers) \wedge (\\
 & \quad \forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & \quad X1\ k1_numbers) \Rightarrow (\forall X2.(m1_subset_1\ X2\ k1_numbers) \Rightarrow (k1_seq_1 \\
 & \quad (k1_pdiff_1\ np_3\ np_3) (k11_finseq_1\ X0\ X1\ X2) = X2)))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & ((v2_xxreal_0\ np_3) \wedge (m2_subset_1\ np_3\ k1_numbers\ k5_numbers)) \wedge \\
 & ((m1_subset_1\ np_3\ k5_numbers) \wedge (m1_subset_1\ np_3\ k1_numbers)) \tag{2}
 \end{aligned}$$

Assume the following.

$$\neg v1_xboole_0\ np_3 \tag{3}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1\ X0\ k1_numbers\ k5_numbers) \Rightarrow (\forall X1. \\
 & (m2_subset_1\ X1\ k1_numbers\ k5_numbers) \Rightarrow (\forall X2.((v1_funct_1 \\
 & X2) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k1_euclid\ X0) \\
 & k1_numbers)))) \Rightarrow (\forall X3.(m2_finseq_2\ X3\ k1_numbers\ (k1_euclid \\
 & X0)) \Rightarrow (k1_pdiff_2\ X0\ X1\ X2\ X3 = k1_partfun1\ k1_numbers\ (k1_euclid \\
 & X0) (k1_euclid\ X0) k1_numbers (k6_pdiff_1\ X0\ X1\ X3) X2)))) \tag{4}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\
& \quad (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2. \\
& \quad ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (\\
& \quad k1_euclid X0) k1_numbers)))) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers \\
& (k1_euclid X0) \Rightarrow ((r3_pdiff_1 X0 X1 X2 X3) \Leftrightarrow (r1_fdiff_1 (k1_partfun1 \\
& k1_numbers (k1_euclid X0) (k1_euclid X0) k1_numbers (k6_pdiff_1 \\
& X0 X1 X3) X2) (k1_seq_1 (k1_pdiff_1 X1 X0) X3))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\
& (m2_finseq_2 X3 k1_numbers (k1_euclid np_3)) \Rightarrow (\forall X4.((\\
& v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid \\
& np_3) k1_numbers)))) \Rightarrow (((X3 = k11_finseq_1 X0 X1 X2) \wedge (r3_pdiff_1 \\
& np_3 np_3 X4 X3)) \Rightarrow (r1_fdiff_1 (k1_pdiff_2 np_3 np_3 X4 X3) X2))))))
\end{aligned}$$