

t68_pdiff_5

(TMEp12ksRm8enK3JynhspdZvrTStk4MW2YQ)

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Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_pdiff_5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pdiff_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ 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 $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (\\ & k1_euclid np_3) k1_numbers)))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid np_3) k1_numbers)))) \Rightarrow \\ & (((r3_pdiff_1 np_3 np_2 X1 X0) \wedge (r3_pdiff_1 np_3 np_2 X2 X0)) \Rightarrow \\ & (r3_pdiff_1 np_3 np_2 (k20_valued_1 (k1_euclid np_3) k1_numbers \\ & k1_numbers X1 X2) X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (\\ & k1_euclid np_3) k1_numbers)))) \Rightarrow ((r2_pdiff_5 X1 X0) \Leftrightarrow (r3_pdiff_1 \\ & np_3 np_2 (k1_pdiff_3 np_1 np_3 X1) X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$\neg v1_xboole_0 np_3 \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((m1_subset_1 X0 k5_numbers)\wedge \\
& (((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 k5_numbers))\wedge((v1_funct_1 \\
& X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X1) \\
& k1_numbers))))))\Rightarrow((v1_funct_1 (k1_pdiff_3 X0 X1 X2))\wedge((v1_funct_2 \\
& (k1_pdiff_3 X0 X1 X2) (k1_euclid X1) k1_numbers)\wedge(m1_subset_1 \\
& (k1_pdiff_3 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X1) \\
& k1_numbers))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3))\Rightarrow(\forall X1. \\
& ((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (\\
& k1_euclid np_3) k1_numbers))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid np_3) k1_numbers))))\Rightarrow \\
& (((r2_pdiff_5 X1 X0)\wedge(r2_pdiff_5 X2 X0))\Rightarrow(r3_pdiff_1 np_3 np_2 \\
& (k20_valued_1 (k1_euclid np_3) k1_numbers k1_numbers (k1_pdiff_3 \\
& np_1 np_3 X1) (k1_pdiff_3 np_1 np_3 X2)) X0))))
\end{aligned}$$