

t41_fdifff_2

(TMb7j3BxFwpH2znbDEmjhzixTezatYqTpmt)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v3_rcomp_1 : \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_valued_0 : \iota \Rightarrow o$ be given. Let $v1_fcont_1 : \iota \Rightarrow o$ be given. Let $v6_valued_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & \quad X1 k1_numbers) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 \\ & \quad (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (((r1_tarski \\ & \quad (k2_rcomp_1 X0 X1) (k1_relset_1 k1_numbers X2)) \wedge ((r2_fdiff_1 \\ & \quad X2 (k2_rcomp_1 X0 X1)) \wedge (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow \\ & \quad (\neg(X3 \in k2_rcomp_1 X0 X1) \wedge (r1_xxreal_0 (k1_fdiff_1 X2 X3) k6_numbers)))))) \Rightarrow \\ & \quad (v5_valued_0 (k2_partfun1 k1_numbers k1_numbers X2 (k2_rcomp_1 \\ & \quad \quad X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow ((r2_fdiff_1 X1 X0) \Rightarrow \\ & \quad (v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers X1 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (((r1_tarski \\
& (k2_rcomp_1 X0 X1) (k1_relset_1 k1_numbers X2)) \wedge (v1_fcont_1 (\\
& k2_partfun1 k1_numbers k1_numbers X2 (k2_rcomp_1 X0 X1)))) \Rightarrow ((\\
& (\neg v5_valued_0 (k2_partfun1 k1_numbers k1_numbers X2 (k2_rcomp_1 \\
& X0 X1))) \wedge (\neg v6_valued_0 (k2_partfun1 k1_numbers k1_numbers X2 \\
& (k2_rcomp_1 X0 X1)))) \vee (v3_rcomp_1 (k2_relset_1 k1_numbers (k2_partfun1 \\
& k1_numbers k1_numbers X2 (k2_rcomp_1 X0 X1)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (((r1_tarski \\
& (k2_rcomp_1 X0 X1) (k1_relset_1 k1_numbers X2)) \wedge ((r2_fdiff_1 \\
& X2 (k2_rcomp_1 X0 X1)) \wedge (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow \\
& (\neg (X3 \in k2_rcomp_1 X0 X1) \wedge (r1_xxreal_0 k6_numbers (k1_fdiff_1 \\
& X2 X3)))))) \Rightarrow (v6_valued_0 (k2_partfun1 k1_numbers k1_numbers \\
& X2 (k2_rcomp_1 X0 X1))))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (((r1_tarski \\
& (k2_rcomp_1 X0 X1) (k1_relset_1 k1_numbers X2)) \wedge (r2_fdiff_1 X2 \\
& (k2_rcomp_1 X0 X1))) \Rightarrow (((\exists X3.(m1_subset_1 X3 k1_numbers) \wedge \\
& ((X3 \in k2_rcomp_1 X0 X1) \wedge (r1_xxreal_0 (k1_fdiff_1 X2 X3) k6_numbers))) \wedge \\
& (\exists X3.(m1_subset_1 X3 k1_numbers) \wedge ((X3 \in k2_rcomp_1 X0 X1) \wedge \\
& (r1_xxreal_0 k6_numbers (k1_fdiff_1 X2 X3)))))) \vee (v3_rcomp_1 (\\
& k2_relset_1 k1_numbers (k2_partfun1 k1_numbers k1_numbers X2 \\
& (k2_rcomp_1 X0 X1)))))))))
\end{aligned}$$