

t2_ndiff_4

(TMc5QXFgrEFZZc3UyJo963TP3HbBC3yHHBi)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ 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 $k1_euclid : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_ndiff_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_ndiff_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\
 & (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & \quad k1_numbers (k1_euclid X0)))))) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\\
 & \quad (r1_ndiff_4 X0 X1 X2) \Leftrightarrow (\exists X3.((v1_funct_1 X3) \wedge (m1_subset_1 \\
 & \quad X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (u1_struct_0 (k4_real_ns1 \\
 & \quad X0)))))) \wedge ((X1 = X3) \wedge (r1_ndiff_3 (k4_real_ns1 X0) X3 X2))))))
 \end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned}
 & \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\
 & (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & \quad k1_numbers (k1_euclid X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge \\
 & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (u1_struct_0 \\
 & \quad (k4_real_ns1 X0)))))) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow ((X2 = X1) \Rightarrow \\
 & ((r1_ndiff_4 X0 X1 X3) \Leftrightarrow (r1_ndiff_3 (k4_real_ns1 X0) X2 X3))))))
 \end{aligned}$$