

t25_rfunct_4

(TMbrbH2akF1j97kZwYiTBCrXYgnhqrX7WTeX)

October 27, 2020

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 $k1_numbers : \iota$ be given. Let $r4_rfunct_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_rfunct_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xxreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & \quad k1_numbers k1_numbers)))) \Rightarrow (\forall X1.(r4_rfunct_4 X0 X1) \Leftrightarrow (\\
 & (r1_tarski X1 (k9_xtuple_0 X0)) \wedge (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\
 & \quad (\neg(\neg r1_xxreal_0 X2 k6_numbers) \wedge (\neg r1_xxreal_0 np_1 X2) \wedge (\exists X3. \\
 & \quad (m1_subset_1 X3 k1_numbers) \wedge (\exists X4.(m1_subset_1 X4 k1_numbers) \wedge \\
 & \quad ((X3 \in X1) \wedge ((X4 \in X1) \wedge ((k9_binop_2 (k11_binop_2 X2 X3) (k11_binop_2 \\
 & \quad (k10_binop_2 np_1 X2) X4) \in X1) \wedge ((X3 \neq X4) \wedge (r1_xxreal_0 (k4_xxreal_0 \\
 & \quad (k1_seq_1 X0 X3) (k1_seq_1 X0 X4)) (k1_seq_1 X0 (k9_binop_2 (k11_binop_2 \\
 & \quad X2 X3) (k11_binop_2 (k10_binop_2 np_1 X2) X4))))))))))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & \quad k1_numbers k1_numbers)))) \Rightarrow (\forall X1.(r3_rfunct_4 X0 X1) \Leftrightarrow (\\
 & (r1_tarski X1 (k9_xtuple_0 X0)) \wedge (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\
 & \quad (\neg(\neg r1_xxreal_0 X2 k6_numbers) \wedge (\neg r1_xxreal_0 np_1 X2) \wedge (\exists X3. \\
 & \quad (m1_subset_1 X3 k1_numbers) \wedge (\exists X4.(m1_subset_1 X4 k1_numbers) \wedge \\
 & \quad ((X3 \in X1) \wedge ((X4 \in X1) \wedge ((k9_binop_2 (k11_binop_2 X2 X3) (k11_binop_2 \\
 & \quad (k10_binop_2 np_1 X2) X4) \in X1) \wedge ((k1_seq_1 X0 X3 \neq k1_seq_1 X0 X4) \wedge \\
 & \quad (r1_xxreal_0 (k4_xxreal_0 (k1_seq_1 X0 X3) (k1_seq_1 X0 X4)) (k1_seq_1 \\
 & \quad X0 (k9_binop_2 (k11_binop_2 X2 X3) (k11_binop_2 (k10_binop_2 np_1 \\
 & \quad X2) X4))))))))))))) \tag{2}
 \end{aligned}$$

Theorem 1

$$\forall X0.\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\Rightarrow((r4_rfunct_4 X1 X0)\Rightarrow (r3_rfunct_4 X1 X0))$$