

t22_ratfunc1

(TMHB64BTuZAEV486YyxYpWgtK2h5vGHpbTY)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v1_vectsp_2 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $v4_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_algseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_polynom3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k14_polynom3 : \iota \Rightarrow \iota$ be given. Let $k3_group_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r1_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_hurwitz : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k11_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_ratfunc1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\ & ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\ & ((v4_rlvect_1 X0) \wedge ((v1_vectsp_2 X0) \wedge (l6_algstr_0 X0)))))))))) \wedge \\ & (m1_ratfunc1 X1 X0)) \Rightarrow (m1_ratfunc1 (k6_ratfunc1 X0 X1) X0) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 \\
& X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((\\
& v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 \\
& X0) \wedge ((v1_vectsp_2 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1_ratfunc1 X1 X0) \Rightarrow (\forall X2. (m1_ratfunc1 X2 X0) \Rightarrow (((\neg v4_ratfunc1 \\
& X1 X0) \Rightarrow ((X2 = k11_ratfunc1 X0 X1) \Leftrightarrow (\exists X3. (m1_ratfunc1 X3 X0) \wedge \\
& (\exists X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k5_numbers (u1_struct_0 \\
& X0)) \wedge ((v1_algseq_1 X4 X0) \wedge ((\neg v1_ratfunc1 X4 X0) \wedge (m1_subset_1 \\
& X4 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))))))) \wedge \\
& ((X1 = k3_ratfunc1 X0 (k13_polynom3 X0 X4 (k4_ratfunc1 X0 X3)) (k13_polynom3 \\
& X0 X4 (k5_ratfunc1 X0 X3))) \wedge ((v5_ratfunc1 X3 X0) \wedge ((X2 = k6_ratfunc1 \\
& X0 X3) \wedge (\exists X5. (m2_finseq_1 X5 (u1_struct_0 (k14_polynom3 \\
& X0))) \wedge ((X4 = k3_group_4 (k14_polynom3 X0) X5) \wedge (\forall X6. (m1_subset_1 \\
& X6 k5_numbers) \Rightarrow (\neg (X6 \in k4_finseq_1 X5) \wedge (\forall X7. (m1_subset_1 \\
& X7 (u1_struct_0 X0)) \Rightarrow (\neg (r1_ratfunc1 X0 (k4_ratfunc1 X0 X1) (k5_ratfunc1 \\
& X0 X1) X7) \wedge (k1_funct_1 X5 X6 = k3_hurwitz X0 X7 np_1)))))))))) \wedge \\
& ((v4_ratfunc1 X1 X0) \Rightarrow ((X2 = k11_ratfunc1 X0 X1) \Leftrightarrow (X2 = k7_ratfunc1 \\
& X0))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 \\
& X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((\\
& v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 \\
& X0) \wedge ((v1_vectsp_2 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((\neg v4_ratfunc1 X1 X0) \wedge (m1_ratfunc1 X1 X0)) \Rightarrow (\forall X2. (m1_ratfunc1 \\
& X2 X0) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers \\
& (u1_struct_0 X0)) \wedge ((v1_algseq_1 X3 X0) \wedge ((\neg v1_ratfunc1 X3 X0) \wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow (((X1 = k3_ratfunc1 X0 (k13_polynom3 X0 X3 (k4_ratfunc1 \\
& X0 X2)) (k13_polynom3 X0 X3 (k5_ratfunc1 X0 X2))) \wedge (v5_ratfunc1 \\
& X2 X0)) \Rightarrow ((\forall X4. (m2_finseq_1 X4 (u1_struct_0 (k14_polynom3 \\
& X0))) \Rightarrow (\neg (X3 = k3_group_4 (k14_polynom3 X0) X4) \wedge (\forall X5. (m1_subset_1 \\
& X5 k5_numbers) \Rightarrow (\neg (X5 \in k4_finseq_1 X4) \wedge (\forall X6. (m1_subset_1 \\
& X6 (u1_struct_0 X0)) \Rightarrow (\neg (r1_ratfunc1 X0 (k4_ratfunc1 X0 X1) (k5_ratfunc1 \\
& X0 X1) X6) \wedge (k1_funct_1 X4 X5 = k3_hurwitz X0 X6 np_1)))))) \vee (k11_ratfunc1 \\
& X0 X1 = k6_ratfunc1 X0 X2))))))
\end{aligned}$$