

t7_ratfunc1

(TMVNBZ696qkHiaJFmsy4Wf8QuDdt2WzNaTe)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ 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 $v1_funct_1 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_polynom3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $k14_polynom3 : \iota \Rightarrow \iota$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $k9_polynom3 : \iota \Rightarrow \iota$ be given. Let $v2_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v31_algstr_0 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v17_algstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k10_polynom3 : \iota \Rightarrow \iota$ be given. Let $v2_vectsp_1 : \iota \Rightarrow o$ be given. Let $v1_vectsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v7_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v1_vectsp_2 X0) \wedge \\ &(l6_algstr_0 X0)))))) \Rightarrow ((\neg v2_struct_0 (k14_polynom3 X0)) \wedge \\ &(v36_algstr_0 (k14_polynom3 X0)) \wedge (v1_vectsp_2 (k14_polynom3 \\ &X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow ((v1_funct_1 \\ &(k9_polynom3 X0)) \wedge ((v1_funct_2 (k9_polynom3 X0) k5_numbers (\\ &u1_struct_0 X0)) \wedge ((v1_ratfunc1 (k9_polynom3 X0) X0) \wedge (v2_ratfunc1 \\ &(k9_polynom3 X0) X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\ &X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ &(l6_algstr_0 X0)))))) \Rightarrow ((\neg v2_struct_0 (k14_polynom3 X0)) \wedge \\ &(v36_algstr_0 (k14_polynom3 X0)) \wedge (v5_vectsp_1 (k14_polynom3 \\ &X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ &((\neg v2_struct_0 (k14_polynom3 X0)) \wedge ((v13_algstr_0 (k14_polynom3 \\ &X0)) \wedge (v36_algstr_0 (k14_polynom3 X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ &((\neg v2_struct_0 (k14_polynom3 X0)) \wedge ((v36_algstr_0 (k14_polynom3 \\ &X0)) \wedge (v4_rlvect_1 (k14_polynom3 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ &((\neg v2_struct_0 (k14_polynom3 X0)) \wedge ((v36_algstr_0 (k14_polynom3 \\ &X0)) \wedge (v3_rlvect_1 (k14_polynom3 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0. (l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(l1_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\ X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ ((\neg v2_struct_0 (k14_polynom3 X0)) \wedge ((v36_algstr_0 (k14_polynom3 \\ X0)) \wedge (l6_algstr_0 (k14_polynom3 X0)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l6_algstr_0 \\ X0)) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 \\ X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ X0)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 \\ X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ X0))))))))) \Rightarrow ((v1_funct_1 (k11_polynom3 X0 X1 X2)) \wedge ((v1_funct_2 \\ (k11_polynom3 X0 X1 X2) k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 \\ (k11_polynom3 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (\\ u1_struct_0 X0)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.(l5_algstr_0 X0) \Rightarrow ((v31_algstr_0 X0) \Leftrightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((X1 \neq k4_struct_0 X0) \Rightarrow (v17_algstr_0 \\ X1 X0)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.(l3_algstr_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow ((v17_algstr_0 X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((k6_algstr_0 \\ X0 X2 X1 = k6_algstr_0 X0 X3 X1) \Rightarrow (X2 = X3)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v36_algstr_0 X1) \wedge (l6_algstr_0 \\
& X1)))) \Rightarrow ((X1 = k14_polynom3 X0) \Leftrightarrow ((\forall X2.(X2 \in u1_struct_0 X1) \Leftrightarrow \\
& ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 X0)) \wedge \\
& ((v1_algseq_1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers (u1_struct_0 X0)))))))) \wedge ((\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X1)) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k5_numbers \\
& (u1_struct_0 X0)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers (u1_struct_0 X0)))))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge \\
& ((v1_funct_2 X5 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X5 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
& (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k1_algstr_0 X1 X2 X3 = k2_normsp_1 X0 X4 X5)))))) \wedge \\
& ((\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(\\
& m1_subset_1 X3 (u1_struct_0 X1)) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge \\
& ((v1_funct_2 X4 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X4 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
& (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 X5 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k6_algstr_0 X1 X2 X3 = k11_polynom3 \\
& X0 X4 X5)))))) \wedge ((k4_struct_0 X1 = k9_polynom3 X0) \wedge (k5_struct_0 \\
& X1 = k10_polynom3 X0))))))
\end{aligned} \tag{18}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l6_algstr_0 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_vectsp_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& (v1_vectsp_2 X0)))))) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\
& ((v31_algstr_0 X0) \wedge ((v2_vectsp_1 X0) \wedge ((v3_rlvect_1 X0) \wedge (v4_rlvect_1 \\
& X0))))))
\end{aligned} \tag{19}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l6_algstr_0 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v5_vectsp_1 \\
& X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v1_vectsp_1 X0) \wedge (v2_vectsp_1 X0)))
\end{aligned} \tag{20}$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow ((v2_struct_0 X0) \Rightarrow (v7_struct_0 X0)) \tag{21}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\ & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ & ((v1_vectsp_2 X0) \wedge (l6_algstr_0 X0))))))) \Rightarrow (\forall X1.((v1_funct_1 \\ & X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge ((v1_algseq_1 \\ & X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (\\ & u1_struct_0 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 k5_numbers (u1_struct_0 X0)) \wedge ((v1_algseq_1 X2 X0) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers (u1_struct_0 \\ & X0)) \wedge ((v1_algseq_1 X3 X0) \wedge ((\neg v1_ratfunc1 X3 X0) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\ & ((r2_funct_2 k5_numbers (u1_struct_0 X0) (k11_polynom3 X0 X1 X3) \\ & (k11_polynom3 X0 X2 X3)) \Rightarrow (r2_funct_2 k5_numbers (u1_struct_0 \\ & X0) X1 X2)))))) \end{aligned}$$