

t32_ratfunc1

(TMXS5BM8ATVNqwM1HEXgk8arBtfASzaZUyy)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ 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 $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k13_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_ratfunc1 : \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_polynom4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_polynom3 : \iota \Rightarrow \iota$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ 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 $v1_algseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $v9_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_group_1 : \iota \Rightarrow o$ be given. Let $k11_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_vectsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\ & (v4_vectsp_1 X0) \wedge (l6_algstr_0 X0))))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (k2_polynom4 X0 (k10_polynom3 X0) X1 = k5_struct_0 \\ & X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v7_struct_0 X0) \wedge (l5_algstr_0 X0)) \wedge \\ & (m1_ratfunc1 X1 X0)) \Rightarrow (k5_ratfunc1 X0 X1 = k2_xtuple_0 X1) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v7_struct_0 X0)\wedge(l5_algstr_0 X0))\wedge(m1_ratfunc1 X1 X0))\Rightarrow(k4_ratfunc1 X0 X1 = k1_xtuple_0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.(((\neg v7_struct_0 X0)\wedge(l5_algstr_0 \\ &X0))\wedge(((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers (u1_struct_0 \\ &X0))\wedge((v1_algseq_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ &k5_numbers (u1_struct_0 X0))))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 \\ &X2 k5_numbers (u1_struct_0 X0))\wedge((v1_algseq_1 X2 X0)\wedge((\neg v1_ratfunc1 \\ &X2 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (\\ &u1_struct_0 X0))))))))))\Rightarrow(k3_ratfunc1 X0 X1 X2 = k4_tarski X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.k2_xtuple_0 (k4_tarski X0 X1) = X1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k1_xtuple_0 (k4_tarski X0 X1) = X0 \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l5_algstr_0 X0))\Rightarrow((v1_funct_1 (k10_polynom3 X0))\wedge((v1_funct_2 (k10_polynom3 X0) k5_numbers (u1_struct_0 X0))\wedge(v1_algseq_1 (k10_polynom3 X0) X0))) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v6_struct_0 X0)\wedge(l5_algstr_0 X0))\Rightarrow((v1_funct_1 (k10_polynom3 X0))\wedge((v1_funct_2 (k10_polynom3 X0) k5_numbers (u1_struct_0 X0))\wedge(\neg v1_ratfunc1 (k10_polynom3 X0) X0))) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v6_struct_0 X0)\wedge(l4_struct_0 X0))\Rightarrow(\neg v9_struct_0 (k5_struct_0 X0) X0) \quad (9)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(v9_struct_0 (k4_struct_0 X0) X0) \quad (10)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0)\Rightarrow((l2_algstr_0 X0)\wedge(l5_algstr_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0)\Rightarrow((l4_algstr_0 X0)\wedge(l4_struct_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(l4_struct_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l3_struct_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0.((\neg v6_struct_0 X0) \wedge (l5_algstr_0 X0)) \Rightarrow (m1_ratfunc1 (k8_ratfunc1 X0) X0) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v1_group_1 \\ & X0) \wedge (l6_algstr_0 X0))) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers \\ & (u1_struct_0 X0)) \wedge ((v1_algseq_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \wedge (m1_subset_1 \\ & X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k2_polynom4 X0 X1 X2) (u1_struct_0 \\ & X0)) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((l5_algstr_0 X0) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k11_algstr_0 X0 X1) (u1_struct_0 X0)) \quad (17)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l5_algstr_0 X0)) \Rightarrow ((v1_funct_1 (k10_polynom3 X0)) \wedge ((v1_funct_2 (k10_polynom3 X0) k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 (k10_polynom3 X0) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ & (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ & X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & (m1_ratfunc1 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (k13_ratfunc1 X0 X1 X2 = k3_vectsp_1 X0 (k2_polynom4 X0 (k4_ratfunc1 \\ & X0 X1) X2) (k2_polynom4 X0 (k5_ratfunc1 X0 X1) X2)))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.((\neg v6_struct_0 X0) \wedge (l5_algstr_0 X0)) \Rightarrow (k8_ratfunc1 X0 = k3_ratfunc1 X0 (k10_polynom3 X0) (k10_polynom3 X0)) \quad (20)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 \\ X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (\\ l6_algstr_0 X0))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k3_vectsp_1 \\ X0 X1 X2 = k8_group_1 X0 X1 (k11_algstr_0 X0 X2)))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 \\ X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((X1 \neq k4_struct_0 \\ X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((X2 = k11_algstr_0 \\ X0 X1) \Leftrightarrow (k8_group_1 X0 X2 X1 = k5_struct_0 X0)))))) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v5_group_1 \\ X0) \wedge (l3_algstr_0 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k8_group_1 X0 X1 X2 = k8_group_1 \\ X0 X2 X1) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.(l4_algstr_0 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v4_vectsp_1 \\ X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge (v1_group_1 X0))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.(l4_struct_0 X0) \Rightarrow ((\neg v6_struct_0 X0) \Rightarrow (\neg v7_struct_0 X0)) \quad (25)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\ (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k13_ratfunc1 X0 (k8_ratfunc1 \\ X0) X1 = k5_struct_0 X0)) \end{aligned}$$