

t17_zmodul01

(TMTXBbR27cgLUk1u6TTYkXQ3RnjJiIND7Xnp)

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Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ 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 $v2_zmodul01 : \iota \Rightarrow o$ be given. Let $v3_zmodul01 : \iota \Rightarrow o$ be given. Let $v4_zmodul01 : \iota \Rightarrow o$ be given. Let $v5_zmodul01 : \iota \Rightarrow o$ be given. Let $l1_zmodul01 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ 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 $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zmodul01 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 \\
 & X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\
 & ((v2_zmodul01 X1) \wedge ((v3_zmodul01 X1) \wedge ((v4_zmodul01 X1) \wedge ((v5_zmodul01 \\
 & X1) \wedge (l1_zmodul01 X1)))))))))) \Rightarrow (\forall X2.(m2_finseq_1 X2 (\\
 & u1_struct_0 X1)) \Rightarrow (\forall X3.(m2_finseq_1 X3 (u1_struct_0 X1)) \Rightarrow \\
 & (((k3_finseq_1 X2 = k3_finseq_1 X3) \wedge (\forall X4.(m2_subset_1 \\
 & X4 k1_numbers k5_numbers) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 \\
 & X1)) \Rightarrow (((X4 \in k4_finseq_1 X2) \wedge (X5 = k1_funct_1 X3 X4)) \Rightarrow (k1_funct_1 \\
 & X2 X4 = k1_zmodul01 X1 X5 X0)))))) \Rightarrow (k4_rlvect_1 X1 X2 = k1_zmodul01 \\
 & X1 (k4_rlvect_1 X1 X3) X0))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{2}$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(\forall X2.(X2 \in k9_xtuple_0 X1)\Rightarrow(k7_partfun1 X0 X1 X2 = k1_funct_1 X1 X2)) \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers)\Rightarrow((X1 = k3_finseq_1 X0)\Leftrightarrow(k2_finseq_1 X1 = k9_xtuple_0 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (8)$$

Theorem 1

$$\begin{aligned} &\forall X0.(v1_int_1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v2_rlvect_1 X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge((v2_zmodul01 X1)\wedge((v3_zmodul01 X1)\wedge((v4_zmodul01 X1)\wedge((v5_zmodul01 X1)\wedge(l1_zmodul01 X1))))))))))\Rightarrow(\forall X2.(m2_finseq_1 X2 (u1_struct_0 X1))\Rightarrow(\forall X3.(m2_finseq_1 X3 (u1_struct_0 X1))\Rightarrow(((k3_finseq_1 X2 = k3_finseq_1 X3)\wedge(\forall X4.(m2_subset_1 X4 k1_numbers k5_numbers)\Rightarrow((X4 \in k4_finseq_1 X2)\Rightarrow(k1_funct_1 X3 X4 = k1_zmodul01 X1 (k7_partfun1 (u1_struct_0 X1) X2 X4) X0))))\Rightarrow(k4_rlvect_1 X1 X3 = k1_zmodul01 X1 (k4_rlvect_1 X1 X2) X0)))))) \end{aligned}$$