

t1_integr18 (TM-
cEQ5J33FZ23HHkMuy4LkyySwWtGraRqWq)

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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 $v5_rlvect.1 : \iota \Rightarrow o$ be given. Let $v6_rlvect.1 : \iota \Rightarrow o$ be given. Let $v7_rlvect.1 : \iota \Rightarrow o$ be given. Let $v8_rlvect.1 : \iota \Rightarrow o$ be given. Let $v3_normsp.0 : \iota \Rightarrow o$ be given. Let $v4_normsp.0 : \iota \Rightarrow o$ be given. Let $v2_normsp.1 : \iota \Rightarrow o$ be given. Let $l1_normsp.1 : \iota \Rightarrow o$ 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 $k1_binom : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr.0 : \iota \Rightarrow o$ be given. Let $k1_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ 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 $m1_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Let $l2_normsp.0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v2_rlvect.1 X0) \wedge ((v3_rlvect.1 \\ & X0) \wedge ((v4_rlvect.1 X0) \wedge (l2_algstr.0 X0)))))) \Rightarrow (\forall X1.(m2_finseq.1 \\ & X1 (u1_struct.0 X0)) \Rightarrow (\forall X2.(m2_finseq.1 X2 (u1_struct.0 \\ & X0)) \Rightarrow ((k1_relset.1 k5_numbers X1 = k1_relset.1 k5_numbers X2) \Rightarrow \\ & (k4_rlvect.1 X0 (k1_binom X0 X1 X2) = k3_rlvect.1 X0 (k4_rlvect.1 \\ & X0 X1) (k4_rlvect.1 X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat.1 X0) \wedge ((v1_funct.1 X0) \wedge (v1_finseq.1 X0))) \Rightarrow \\ & (\forall X1.((v1_relat.1 X1) \wedge ((v1_funct.1 X1) \wedge (v1_finseq.1 \\ & X1)))) \Rightarrow ((k3_finseq.1 X0 = k3_finseq.1 X1) \Leftrightarrow (k1_relset.1 k5_numbers \\ & X0 = k1_relset.1 k5_numbers X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq.1 X1 X0) \Leftrightarrow (m1_finseq.1 X1 X0) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq.1 X1 X0) \Rightarrow ((v1_relat.1 X1) \wedge ((v1_funct.1 X1) \wedge (v1_finseq.1 X1))) \tag{4}$$

Assume the following.

$$\forall X0.(l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.(l1_normsp_1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l2_normsp_0 X0)) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 \\ & X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\ & (\forall X1.(m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m2_finseq_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m2_finseq_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 X2) \wedge (X3 = k1_binom X0 X1 X2)) \Rightarrow \\ & (k4_rlvect_1 X0 X3 = k3_rlvect_1 X0 (k4_rlvect_1 X0 X1) (k4_rlvect_1 \\ & X0 X2)))))) \end{aligned}$$