

l73_anproj_2

(TMUiT9LHf8uAoY7ZEq59Zn8TevTxUZq4EtE)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ 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 $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $v1_anproj_2 : \iota \Rightarrow o$ be given. Let $v3_anproj_2 : \iota \Rightarrow o$ be given. Let $k5_anproj_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
 & ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
 & X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow ((\exists X1. (m1_subset_1 X1 \\
 & (u1_struct_0 X0)) \wedge (\exists X2. (m1_subset_1 X2 (u1_struct_0 X0)) \wedge \\
 & (\forall X3. (m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4. (m1_subset_1 \\
 & X4 k1_numbers) \Rightarrow ((k3_rlvect_1 X0 (k1_rlvect_1 X0 X1 X3) (k1_rlvect_1 \\
 & X0 X2 X4) = k4_struct_0 X0) \Rightarrow ((X3 = k6_numbers) \wedge (X4 = k6_numbers)))))) \Rightarrow \\
 & (v3_anproj_2 (k5_anproj_1 X0)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge (\\
 & (v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\
 & X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\
 & ((v8_rlvect_1 X1) \wedge (l1_rlvect_1 X1)))))))))) \Rightarrow (\forall X2. (m1_subset_1 \\
 & X2 (u1_struct_0 X1)) \Rightarrow (((X0 = k6_numbers) \vee (X2 = k4_struct_0 X1)) \Rightarrow \\
 & (k1_rlvect_1 X1 X2 X0 = k4_struct_0 X1)))
 \end{aligned} \tag{2}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (3)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (m1_subset_1 (k4_struct_0 X0) (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow ((v1_anproj_2 X0) \Leftrightarrow (\exists X1.(m1_subset_1 X1 \\ & (u1_struct_0 X0)) \wedge (\exists X2.(m1_subset_1 X2 (u1_struct_0 X0)) \wedge \\ & (\exists X3.(m1_subset_1 X3 (u1_struct_0 X0)) \wedge (\forall X4.(m1_subset_1 \\ & X4 k1_numbers) \Rightarrow (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (\forall X6. \\ & (m1_subset_1 X6 k1_numbers) \Rightarrow ((k3_rlvect_1 X0 (k3_rlvect_1 X0 \\ & (k1_rlvect_1 X0 X1 X4) (k1_rlvect_1 X0 X2 X5)) (k1_rlvect_1 X0 X3 \\ & X6) = k4_struct_0 X0) \Rightarrow ((X4 = k6_numbers) \wedge ((X5 = k6_numbers) \wedge (X6 = \\ & k6_numbers)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ & ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\ & X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow ((v1_anproj_2 X0) \Rightarrow (v3_anproj_2 \\ & (k5_anproj_1 X0))) \end{aligned}$$