

t20_bhsp_1

(TMFbp8Q3TMkGirmReTpBnwaoNv57ChNXWHx)

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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 $v2_bhsp.1 : \iota \Rightarrow o$ be given. Let $l1_bhsp.1 : \iota \Rightarrow o$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $r1_bhsp.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_algstr.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_bhsp.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real.1 : \iota \Rightarrow \iota$ be given. Let $k4_struct.0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ 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. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge ((v5_rlvect.1 X0) \wedge \\ & ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 X0) \wedge ((v2_bhsp.1 \\ & X0) \wedge (l1_bhsp.1 X0)))))))))) \Rightarrow (\forall X1. (m1_subset.1 X1 (u1_struct.0 \\ & X0)) \Rightarrow (\forall X2. (m1_subset.1 X2 (u1_struct.0 X0)) \Rightarrow (k2_bhsp.1 \\ & X0 (k4_algstr.0 X0 X1) X2 = k1_real.1 (k2_bhsp.1 X0 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge ((v5_rlvect.1 X0) \wedge \\ & ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 X0) \wedge ((v2_bhsp.1 \\ & X0) \wedge (l1_bhsp.1 X0)))))))))) \Rightarrow (\forall X1. (m1_subset.1 X1 (u1_struct.0 \\ & X0)) \Rightarrow (k2_bhsp.1 X0 X1 (k4_struct.0 X0) = k6_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 \\ & X0) \wedge ((v2_rlvect.1 X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge \\ & ((v5_rlvect.1 X0) \wedge ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 \\ & X0) \wedge ((v2_bhsp.1 X0) \wedge (l1_bhsp.1 X0)))))))))) \wedge ((m1_subset.1 \\ & X1 (u1_struct.0 X0)) \wedge (m1_subset.1 X2 (u1_struct.0 X0))) \Rightarrow ((r1_bhsp.1 \\ & X0 X1 X2) \Rightarrow (r1_bhsp.1 X0 X2 X1)) \end{aligned} \quad (3)$$

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.

$$\forall X0.(l1_bhsp_1 X0) \Rightarrow (l1_rlvect_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (m1_subset_1 (k4_struct_0 X0) (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((l2_algstr_0 X0) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k4_algstr_0 X0 X1) (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_bhsp_1 X0 X1 X2) \Leftrightarrow (k2_bhsp_1 X0 X1 X2 = k6_numbers)))) \quad (9) \end{aligned}$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_bhsp_1 X0 X1 X2) \Rightarrow (r1_bhsp_1 X0 X1 (k4_algstr_0 X0 X2)))) \quad (9) \end{aligned}$$