

t28_bhsp_1

(TMQmxRgjX7ahSt3pBbcvUHm6eQSv7YRu7vy)

October 27, 2020

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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_bhsp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ 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 $k7_square_1 : \iota \Rightarrow \iota$ be given. Let $k6_square_1 : \iota \Rightarrow \iota$ be given. Let $k2_bhsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_bhsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k7_square_1 \ X0 = k6_square_1 \ X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge ((v13_algstr_0 \\ & \ X0) \wedge (v2_rlvect_1 \ X0) \wedge (v3_rlvect_1 \ X0) \wedge (v4_rlvect_1 \ X0) \wedge \\ & ((v5_rlvect_1 \ X0) \wedge (v6_rlvect_1 \ X0) \wedge (v7_rlvect_1 \ X0) \wedge (v8_rlvect_1 \\ & \ X0) \wedge (v2_bhsp_1 \ X0) \wedge (l1_bhsp_1 \ X0)))))) \wedge ((m1_subset_1 \\ & \ X1 \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ X2 \ (u1_struct_0 \ X0))) \Rightarrow (k2_bhsp_1 \\ & \ X0 \ X1 \ X2 = k1_bhsp_1 \ X0 \ X1 \ X2) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xreal_0 (k6_square_1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_bhs_p1 \\ & X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ & X0)))) \Rightarrow (m1_subset_1 (k1_bhs_p1 X0 X1 X2) k1_numbers) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhs_p1 \\ & X0) \wedge (l1_bhs_p1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (k3_bhs_p1 X0 X1 = k7_square_1 (k2_bhs_p1 X0 X1 X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (\forall X1. \\ & (v1_xreal_0 X1) \Rightarrow ((X1 = k6_square_1 X0) \Leftrightarrow ((r1_xxreal_0 k6_numbers \\ & X1) \wedge (k3_square_1 X1 = X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0) \wedge (l1_bhs_p1 X0)) \Rightarrow ((v2_bhs_p1 X0) \Leftrightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow (((k1_bhs_p1 X0 \\ & X1 X1 = k6_numbers) \Rightarrow (X1 = k4_struct_0 X0)) \wedge (((X1 = k4_struct_0 X0) \Rightarrow \\ & (k1_bhs_p1 X0 X1 X1 = k6_numbers)) \wedge ((r1_xxreal_0 k6_numbers (k1_bhs_p1 \\ & X0 X1 X1)) \wedge ((k1_bhs_p1 X0 X1 X2 = k1_bhs_p1 X0 X2 X1) \wedge ((k1_bhs_p1 \\ & X0 (k1_algstr_0 X0 X1 X2) X3 = k7_real_1 (k1_bhs_p1 X0 X1 X3) (k1_bhs_p1 \\ & X0 X2 X3)) \wedge (k1_bhs_p1 X0 (k1_rlvect_1 X0 X1 X4) X2 = k8_real_1 X4 (\\ & k1_bhs_p1 X0 X1 X2)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhs_p1 \\ & X0) \wedge (l1_bhs_p1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (r1_xxreal_0 k6_numbers (k3_bhs_p1 X0 X1))) \end{aligned}$$