

t15_bhsp_1 (TM-
TUGc5kzgNxNy44weGRvconDFGBg9U2Gy6)

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 $k2_bhsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_numbers : \iota$ 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 $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & X1 k1_numbers) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 \\
 & X2) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge \\
 & ((v5_rlvect_1 X2) \wedge ((v6_rlvect_1 X2) \wedge ((v7_rlvect_1 X2) \wedge ((v8_rlvect_1 \\
 & X2) \wedge ((v2_bhsp_1 X2) \wedge (l1_bhsp_1 X2)))))))))) \Rightarrow (\forall X3.(\\
 & m1_subset_1 X3 (u1_struct_0 X2)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
 & (u1_struct_0 X2)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X2)) \Rightarrow \\
 & (k2_bhsp_1 X2 X3 (k3_rlvect_1 X2 (k1_rlvect_1 X2 X4 X0) (k1_rlvect_1 \\
 & X2 X5 X1)) = k7_real_1 (k8_real_1 X0 (k2_bhsp_1 X2 X3 X4) (k8_real_1 \\
 & X1 (k2_bhsp_1 X2 X3 X5)))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 \\
& X2) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge \\
& ((v5_rlvect_1 X2) \wedge ((v6_rlvect_1 X2) \wedge ((v7_rlvect_1 X2) \wedge ((v8_rlvect_1 \\
& X2) \wedge ((v2_bhspl_1 X2) \wedge (l1_bhspl_1 X2)))))))))) \Rightarrow (\forall X3.(\\
& m1_subset_1 X3 (u1_struct_0 X2)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 X2)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X2)) \Rightarrow \\
& (k2_bhspl_1 X2 (k3_rlvect_1 X2 (k1_rlvect_1 X2 X3 X0) (k1_rlvect_1 \\
& X2 X4 X1)) X5 = k7_real_1 (k8_real_1 X0 (k2_bhspl_1 X2 X3 X5)) (k8_real_1 \\
& X1 (k2_bhspl_1 X2 X4 X5)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((\forall X3.(\\
& m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow \\
& ((k3_rlvect_1 X0 (k1_rlvect_1 X0 X1 X3) (k1_rlvect_1 X0 X2 X4) = k4_struct_0 \\
& X0) \Rightarrow ((X3 = k6_numbers) \wedge (X4 = k6_numbers)))))) \Rightarrow ((X1 \neq X2) \wedge ((X1 \neq \\
& k4_struct_0 X0) \wedge (X2 \neq k4_struct_0 X0))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhspl_1 \\
& X0) \wedge (l1_bhspl_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (k2_bhspl_1 X0 (k4_struct_0 X0) X1 = k6_numbers))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(l1_bhspl_1 X0) \Rightarrow (l1_rlvect_1 X0) \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhspl_1 \\
& X0) \wedge (l1_bhspl_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (k2_bhspl_1 X0 X1 (k4_struct_0 X0) = k6_numbers))
\end{aligned}$$