

t67_convex4

(TMFwgf45852Wje1nQA7rZhV56zUSoGuSQh)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v2_clvect_1 : \iota \Rightarrow o$ be given. Let $v3_clvect_1 : \iota \Rightarrow o$ be given. Let $v4_clvect_1 : \iota \Rightarrow o$ be given. Let $v5_clvect_1 : \iota \Rightarrow o$ be given. Let $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v2_convex4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_rusub_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_convex4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_complex1 : \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $k6_rusub_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ & X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge \\ & ((v5_clvect_1 X0) \wedge (l1_clvect_1 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(v1_xcmplx_0 \\ & X3) \Rightarrow (\forall X4.(v1_xcmplx_0 X4) \Rightarrow (((v2_convex4 X1 X0) \wedge (v2_convex4 \\ & X2 X0)) \Rightarrow (v2_convex4 (k7_rusub_4 X0 (k19_convex4 X0 X1 X3) (k19_convex4 \\ & X0 X2 X4)) X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 \\ & X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (k19_convex4 X0 X1 k6_complex1 = X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge (l2_algstr_0 X0))) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (k7_rusub_4 \\ & X0 X1 X2 = k6_rusub_4 X0 X1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l1_clvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l2_algstr_0 \\ & X0)) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (m1_subset_1 (k6_rusub_4 \\ & X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$m1_subset_1 k6_complex1 k2_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_clvect_1 \\ & X0)) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge (v1_xcmplx_0 \\ & X2))) \Rightarrow (m1_subset_1 (k19_convex4 X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \end{aligned} \quad (7)$$

Assume the following.

$$k6_complex1 = np_1 \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ & X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge \\ & ((v5_clvect_1 X0) \wedge (l1_clvect_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X4.(v1_xcmplx_0 \\ & X4) \Rightarrow (\forall X5.(v1_xcmplx_0 X5) \Rightarrow (\forall X6.(v1_xcmplx_0 X6) \Rightarrow \\ & (((v2_convex4 X1 X0) \wedge ((v2_convex4 X2 X0) \wedge (v2_convex4 X3 X0))) \Rightarrow \\ & (v2_convex4 (k7_rusub_4 X0 (k7_rusub_4 X0 (k19_convex4 X0 X1 X4) \\ & (k19_convex4 X0 X2 X5)) (k19_convex4 X0 X3 X6)) X0))))))))) \end{aligned}$$