

t13_convex4

(TMd1jdeohCyfo6QxN5HUcxdegaVntwE4396)

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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 $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $m2_convex4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_subset_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_convex4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_convex4 : \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_convex4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_convex4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(r1_tarski\ X0\ k1_xboole_0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0) \wedge ((v13_algstr_0\ X0) \wedge ((v2_rlvect_1\ X0) \wedge ((v3_rlvect_1\ X0) \wedge ((v4_rlvect_1\ X0) \wedge (l1_clvect_1\ X0)))))) \Rightarrow (k4_convex4\ X0\ (k2_convex4\ X0) = k4_struct_0\ X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0\ X0) \wedge (l2_algstr_0\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow (\forall X2.(m2_convex4\ X2\ X0\ X1) \Rightarrow (m1_convex4\ X2\ X0)) \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0.m1_subset_1\ (k1_subset_1\ X0)\ (k1_zfmisc_1\ X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ & (m1_convex4 X2 X0) \Rightarrow ((m2_convex4 X2 X0 X1) \Leftrightarrow (r1_tarski (k1_convex4 \\ & X0 X2) X1)))) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_convex4 X1 X0) \Rightarrow ((X1 = k2_convex4 X0) \Leftrightarrow (k1_convex4 X0 X1 = k1_xboole_0))) \end{aligned} \tag{7}$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota.v1_xboole_0 X0) \tag{8}$$

Assume the following.

$$\forall X0.k1_subset_1 X0 = k1_xboole_0 \tag{9}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l1_clvect_1 X0)))))) \Rightarrow \\ & (\forall X1.(m2_convex4 X1 X0 (k1_subset_1 (u1_struct_0 X0))) \Rightarrow \\ & (k4_convex4 X0 X1 = k4_struct_0 X0)) \end{aligned}$$