

## l18\_simplex2

(TMN6qXZ15qvzEbH5acujWcTXWatFpVprVZV)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $k14\_euclid : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $v1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v6\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v7\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v8\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v9\_metric\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (u1\_struct\_0 (k14\_euclid X0) = u1\_struct\_0 (k15\_euclid X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (u1\_struct\_0 (k15\_euclid X0) = k1\_euclid X0) \quad (2)$$

Assume the following.

$$\forall X0.(l1\_rltopsp1 X0) \Rightarrow ((l1\_rlvect\_1 X0) \wedge (l1\_pre\_topc X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (l1\_struct\_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.(l1\_metric\_1 X0) \Rightarrow (l1\_struct\_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow ((v5\_rltopsp1 (k15\_euclid X0)) \wedge (l1\_rltopsp1 (k15\_euclid X0))) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow & ((v1\_metric\_1\ (k14\_euclid\ X0)) \wedge \\ & ((v6\_metric\_1\ (k14\_euclid\ X0)) \wedge ((v7\_metric\_1\ (k14\_euclid\ X0)) \wedge \\ & ((v8\_metric\_1\ (k14\_euclid\ X0)) \wedge ((v9\_metric\_1\ (k14\_euclid\ X0)) \wedge \\ & (l1\_metric\_1\ (k14\_euclid\ X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0) \Rightarrow (k2\_struct\_0\ X0 = u1\_struct\_0\ X0) \quad (8)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (k2\_struct\_0\ (k15\_euclid\ X0) = k2\_struct\_0\ (k14\_euclid\ X0))$$